

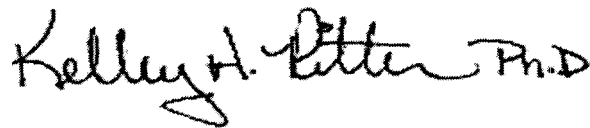
**APPROVED BY THE GRADUATE COMMITTEE OF:**

---

Dr. Daniel Sivek, Committee Chair  
Professor of Environmental Education and Interpretation

---

Dr. Joseph Passineau  
Professor of Human Dimensions of Natural Resource Management

A handwritten signature in black ink that reads "Kelley A. Ritter Ph.D." The signature is written in a cursive style with a large initial 'K' and 'R'.

---

Dr. Kelley Ritter  
Instructor of Health Promotion and Human Development

---

Mr. Tom Quinn  
Program Manager, Central Wisconsin Environmental Station

The Development, Implementation, and Evaluation of an Environmental  
Education Family Program for the Central Wisconsin Environmental Station

by

Abigail Louise Enlund

A Thesis Submitted in partial fulfillment of the degree

MASTER OF SCIENCE  
IN  
NATURAL RESOURCES (ENVIRONMENTAL EDUCATION AND  
INTERPRETATION)

College of Natural Resources  
UNIVERSITY OF WISCONSIN  
Stevens Point, Wisconsin

April 2007

**APPROVED BY THE GRADUATE COMMITTEE OF:**

---

Dr. Daniel Sivek, Committee Chair  
Professor of Environmental Education and Interpretation

---

Dr. Joseph Passineau  
Professor of Human Dimensions of Natural Resource Management

---

Dr. Kelley Ritter  
Instructor of Health Promotion and Human Development

---

Mr. Tom Quinn  
Program Manager, Central Wisconsin Environmental Station

## **Abstract**

As more and more challenges are facing the natural world the importance of young children having a connection to nature and a desire to understand how it works is becoming ever more important. Free-choice learning experiences, such as family environmental education programs, that occur in non-formal environmental education settings are one way that this can be accomplished, and have been shown to be able to change attitudes about the environment. It is important to understand exactly what parents are looking for in a family environmental education program. The goal of this study was to develop, implement and evaluate an environmental education family program for the Central Wisconsin Environmental Station (CWES). The objectives for the research were to 1) to identify and examine for content and effectiveness environmental education family programs used in selected centers throughout the country, 2) determine the features of family programs that parents in central Wisconsin would want to see offered at the CWES, 3) develop a family program for the CWES that reflects what parents asked for and adopts features of other successful programs throughout the country, 4) implement the family program that was developed, and 5) evaluate the family program to determine if the development and implementation were successful. Information gathering was done to determine what was occurring in family programs around the country by looking at programs at ten reputable centers. This information revealed certain trends that were used in the development phase of the program. One hundred and fifty seven surveys were sent out to parents of preschool children in central Wisconsin (return rate of 43%) to determine what they wanted to see in a family program. A program, “Discover the Wonder of the Woods”, was developed

based directly on the data that were collected and was implemented in spring 2007 for four families. The program was evaluated in four different ways; an observation, alternative assessment, post-program interviews and a post-program survey. It was concluded that the program was found to have been successful in six out of the eight indicators that were used to determine success. Conclusions support the ideas that family environmental education programs are an effective way to present environmental information and that environmental education can effectively be taught to children as young as preschoolers. From the research inferences were made about ways to increase the attendance of the family program. Recommendations are made about future research into family programs and about the implementation of future family programs.

## **Acknowledgements**

I would not have made it through the masters program without the assistance and constant support of my advisor Dr. Daniel Sivek. From the very beginning no matter the question or concern that I had Dr. Sivek was there to guide me through the process. He has been an incredible mentor for me over the past two years not only with my research work but with school work, my graduate assistantship and many other projects. Having an advisor like Dr. Sivek made this process and research possible.

The opportunity that I was given with my graduate assistantship at the Central Wisconsin Environmental Station (CWES) lead to the development of this research and for that I have to thank the director Scott Johnson. Scott allowed me the opportunity to pursue an area of research that I was very interested in and passionate about. I have also learned a great deal from Scott about what it takes to run a thriving, successful environmental education facility. The knowledge I have gained from Scott and experiences that I had as a result of this graduate assistantship will no doubt help me immensely in the future.

I was blessed to be given the opportunity to work with Tom Quinn, the program manager at the CWES. Tom has been crucial in all stages of my research. He was a sounding board for ideas and problems, an editor, a reviewer and a friend. Tom helped me to laugh when things got too stressful and encouraged me whenever I needed it. I learned how to be a better researcher, teacher and environmental educator from my time with Tom.

The other two members of my committee, Dr. Kelley Ritter and Dr. Joseph Passineau, have been crucial to this research. Dr. Kelley Ritter was been helpful in

creating a research path and family program that is age appropriate for preschool children. Having someone with experience dealing with this age level on my committee that can look over my research and family program has been wonderful. Dr. Joe Passineau has a great deal of knowledge and passion for family programming. His encouragement and guidance at the beginning of the research was extremely valuable. Dr. Passineau directed me to resources that were critical to my understanding of why family programs are so important.

Lorrie Richardson, the director of the Geselle Institute, has been very supportive of my research. She allowed me to give her parents numerous surveys and advertise my program to the families that she works with. Lorrie also worked as an additional expert in the field of early childhood development to review my family program to ensure that it was developmentally appropriate.

Many other people helped to make this research possible. The rest of the core staff at the Central Wisconsin Environmental Station, Ella Weetz, Mike Shuster, and Janice Moe gave of their time and talents to help make the family program a success. Karen Bryan, and educator and mentor at Shaw Nature Reserve, helped to review materials and provide me with support throughout the entire process.

Lastly, I have to thank my husband. His love and support helped me to make it through this process. He stuck by me and encouraged me even through the most stressful of times. His ability to make me smile and take my mind off of my work has been an incredible blessing.

# Table of Contents

<b>I.</b>	<b>Chapter One – Introduction</b>	<b>1</b>
	A. Statement of the Problem	1
	B. Statement of the Objectives	1
	C. Importance of the Study	2
	1. Importance for Environmental Education Facilities	2
	2. Importance for Preschool Children	3
	3. Importance of the Result	4
	D. The Delimitations	4
	E. Definition of Terms	5
	F. The Assumptions	6
<b>II.</b>	<b>Chapter Two - Review of Related Literature</b>	<b>8</b>
	A. Introduction	8
	B. CWES Programming	9
	C. Environmental Sensitivity	10
	D. Non-formal Environmental Education	12
	E. Family Programs	14
	F. Intergenerational Influence	15
	G. Early Environmental Education	17
	H. Program Development	18
	I. Program Evaluation	19
	1. Observations	21
	2. Interviews	23
	3. Focus Groups	24
	4. Surveys or questionnaires	25
	5. Authentic Assessment	25
	6. Analysis of Results	26
	J. Summary	27
<b>III.</b>	<b>Chapter Three – Methods</b>	<b>28</b>
	A. Introduction	28
	B. Objective One	29
	C. Objective Two	29
	1. Focus Group	30
	2. Open-ended Survey to Parents	31
	3. Second Survey to Parents	33
	4. Pilot Test	42
	5. Reminder Letter	43
	D. Objective Three	43
	E. Objective Four	45
	F. Objective Five	45



1. Observation Evaluation	46
2. Alternative Assessment Tool	46
3. Post-program Interview	48
4. Post-program Survey	48
5. Development of Evaluation Tools	49
<b>IV. Chapter Four – Results</b>	<b>51</b>
A. Introduction	51
B. Objective One	52
1. Kalamazoo Nature Center	55
2. New Canaan Nature Center	56
3. Schlitz Audubon Nature Center	58
4. Museum of the Hudson Highlands	59
5. The Gordon Bubolz Nature Center	60
6. Bay Beach Wildlife Sanctuary	61
7. Missouri Botanical Garden	61
8. Shaw Nature Reserve	63
9. Butterfly House	64
10. Pocono Environmental Education Center (PEEC)	65
11. Summary	66
C. Objective Two	67
1. Open-ended Survey to Parents	68
2. Second Survey to Parents	75
D. Objective Three	89
1. Description of Program	89
2. Advertising	94
3. Registration Format	96
E. Objective Four	96
F. Objective Five	99
1. Observation Evaluation	99
2. Alternative Assessment	105
3. Post-Program Interview	107
4. Post-Program Survey	111
<b>V. Chapter Five – Conclusions, Inferences and Recommendations</b>	<b>114</b>
A. Introduction	114
B. Conclusions	115
1. Financially Sound	115
2. Replicable	116
3. Accomplishes Objectives	117
4. High Rate of Attendance	118
5. High rate of Enjoyment	119
6. High rate of Information Gained	120
7. Intention to Participate in Additional Event	121

8. Ability to Increase Environmental Sensitivity	122
9. Other Conclusions	123
C. Inferences	124
D. Recommendations	125
1. Programming	126
2. Future Research	128
<b>VI. Chapter Six – Appendices</b>	<b>136</b>
Appendix A – Focus Group Information	137
Appendix B – Informal Information Letter to Parents for Open-ended Survey	140
Appendix B1 – Consent Form for Open-ended Survey	141
Appendix B2 – Open-ended Survey to Parents	142
Appendix C – Pilot Test Questionnaire	144
Appendix D – Informal Information Letter to Parents for Second Survey	145
Appendix D1 – Consent Form for Second Survey	146
Appendix D2 – Second Survey to Parents	147
Appendix D3 – Prize Drawing Slip	151
Appendix E – Cover Letter to Teachers	152
Appendix F – Reminder Letter to Second Survey	153
Appendix G – Open-ended Survey Results Compiled	154
Appendix H – Second Survey to Parents Results Compiled	158
Appendix I – Family Program Description	167
Appendix J – Validity Panel Letter	170
Appendix J1 – Validity Panel Instructions	171
Appendix K – Family Program Mailing Advertisement	181
Appendix L – Media Advisory	182
Appendix M – Family Program Flyer	183
Appendix N – Observation Form	184
Appendix O – Alternative Assessment	197
Appendix P – Post-Program Interview	199
Appendix Q – Post-Program Survey	202
Appendix R – Alternative Assessment Totals	206
Appendix S – Post Program Interview Results	210
Appendix T – Post Program Survey Results	216

## List of Tables

Table One – Open-ended Survey to Parents	31
Table Two – Section One – General Questions Section of Second Survey	35
Table Three – Section Two – Content Related Section of Second Survey	36
Table Four – Section Three – Activity Related Section of Second Survey	37
Table Five – Section Four – Time Related Section of Second Survey	39
Table Six – Section Five – Cost Related Section of Second Survey	40
Table Seven – Section Six – General Program Development Section of Second Survey	41
Table Eight – Grading Rubric for Alternative Assessment Tool	47
Table Nine – Thesis Timeline	50
Table Ten – Nature Center Description Basics	52
Table Eleven – What Parents Say Their Preschool Aged Children like to do Outside	69
Table Twelve– Last Activity Parents Participated in with Their Child	69
Table Thirteen – Resources Parents are Using	72
Table Fourteen – What Parents Want their Children to do at a Family Program	73
Table Fifteen – How Parents felt a Family Program Would Benefit Them	74
Table Sixteen – Respondent Demographics	78
Table Seventeen – Interest Level of Parents in Different Activity Format Options	81
Table Eighteen – How Long Parents Feel their Child Can Enjoy One Activity	85
Table Nineteen – Time of Year Parents Feel is Best for a Family Program	85
Table Twenty – How Much the Parents are Willing to Pay for Different Types of Programs	87
Table Twenty-One – Incentives Parents Would be Most Interested in Receiving	88
Table Twenty-Two – Methods of Advertisement Parents feel they are Most Likely to See	89
Table Twenty-Three – Budget for Family Environmental Education Program	98

## List of Figures

Figure One – Topics that Parents feel Their Children are Most Interested In	70
Figure Two – Length of Time Parents Feel an Activity can Hold their Child’s Attention	71
Figure Three – Topics that Parents Felt their Childen would be Most Interested In	80
Figure Four – Interest Level Parents Feel Their Children would have in Different Activities	82
Figure Five – How Parents Ranked Different Program Formats	84

# CHAPTER ONE

## Outline of Chapter One – Introduction

- I. Introduction
  - A. Statement of the Problem
  - B. Statement of the Objectives
  - C. Importance of the Study
    - 1. Importance for Environmental Education Facilities
    - 2. Importance for Preschool Children
    - 3. Importance of the Result
  - D. The Delimitations
  - E. Definition of Terms
  - F. The Assumptions

## **I. Introduction**

### **A. Statement of the Problem**

This research problem was to develop, implement and evaluate an environmental education family program for the Central Wisconsin Environmental Station (CWES). The need for this research stems in part due to a lack of information on the effectiveness of early environmental education programs in the non-formal sector working with children as young as four and five years old. There is also a need to determine whether or not it is feasible for the CWES to add programs for families or add programs for preschool aged students to the programming that is currently offered.

### **B. Statement of Objectives**

1. The first objective was to identify and examine for content and effectiveness environmental education family programs used in selected centers throughout the country.

2. The second objective was to determine the features of family programs that parents in central Wisconsin would want to see offered at the CWES.
3. The third objective was to develop a family program for the CWES that reflects what parents asked for and adopts features of other successful programs throughout the country.
4. The fourth objective was to implement the family program that was developed.
5. The fifth objective was to evaluate the family program to determine if the development and implementation were successful.

## **C. Importance of the Study**

### **1. Importance for Environmental Education Centers and the CWES**

Offering family programs can be an asset for environmental education programs and the community that they serve. On the importance of family programs, Marlyn Doan writes, “In a world where even youngsters are programmed into busy, separate-from-the-family routines, these outdoor times are our special shared experiences” (1979). Allowing parents the opportunity to help reinforce to their children what schools are trying to teach is very important. Parents have limited time and opportunity to do this on their own because of the planning and research that can be involved, so it is important for nonformal education centers to provide a way for parents to become directly involved in environmental education experiences with their children. These shared experiences can also be very eye opening to the parents about the environment that their children are growing up in, and what they are learning about the condition of the environment.

The CWES does a great deal of residential and day programs for schools around

Wisconsin but does not currently offer programs specifically designed for preschool aged students. Determining whether or not environmental education can be effectively delivered to preschool aged students at the CWES and developing a program to be able to do that could lead to additional programming opportunities for the CWES in the future. The CWES also has some family camp weekends that they offer in the summer but does not currently offer any half day or smaller family programs. Gaining information on whether or not parents would be interested in these types of family programs would create an additional way for the CWES to reach out to the public and to families.

## **2. Importance for Preschool Children**

Environmental education family programs are vital for preschool age children, as well as older children. Research has been done to show how perfectly matched young children are to the type of learning that can be done in nonformal environmental education settings. The research also shows just how important the early education years are to making an impression on the young minds when it comes to the environment. Because of the way that young children learn, with concrete, first-hand experiences, this age group is a perfect match for environmental education (Ginsburg and Opper, 1969, Gullo, 1992, Oltman, 2002). In the nonformal environmental education setting the children are surrounded by first-hand experiences. The children are placed directly in the resource that they are learning about, be it a forest, field or pond. These types of first-hand experiences, if done in a positive way, are critical when trying to create children who have awareness and an appreciation for the outdoors. A study done by Dr. Daniel Sivek found that exposure to the outdoors was the number one environmental influence that helped to create students that were more environmentally sensitive (Sivek, 2002). This

environmental sensitivity is developed further by Hungerford and Volk in a study looking at the variables that are needed to create environmentally responsible citizen behavior (1990). As one of the “entry-level variables” Hungerford and Volk believed that environmental sensitivity was necessary in order for people to make responsible decisions and take responsible actions later in life (1990).

It is critical that these positive experiences occur early in life so that the children form a bond with the natural world (Carson, 1956, Oltman, 2002). Creating this bond needs to be done at an early age so that the children are more likely to be committed and truly interested in the natural world around them and what is going on with that world (Regnier, Gross and Zimmerman, 1992).

### **3. Importance of the Result**

The information gathered during this project-specifically the research of existing family programs throughout the country and the surveys conducted of what parents want in a family program-provided priceless information for environmental education centers. This information can be used to create new programs that emulate other programs that are working well or to increase the participation in existing programs. Also, the benefit for CWES is the additional information they have about another way to educate students and families.

### **D. The Delimitations**

1. The first delimitation was that the study only looked at selected centers throughout the country and did not do an examination of every one.

2. The second delimitation was that only selected parents with preschool aged children in the central Wisconsin area were surveyed.
3. The third delimitation was that the program was developed specifically for the CWES property, and results may only be generalized to the CWES.
4. The fourth delimitation was that the main researcher of this study was also be the main instructor of the family program.
5. The fifth delimitation was that only one environmental education family program was developed.

### **E. Definitions of Terms**

1. Centers: any place where nonformal environmental education is taking place. This could include, but is not limited to residential centers, camps, zoos, parks, and aquariums.
2. CWES: the Central Wisconsin Environmental Station is a residential environmental education facility used mostly by local school groups for field trips and is operated by the University of Wisconsin-Stevens Point.
3. Environmental Education: “is aimed at producing a citizenry that is knowledgeable concerning the biophysical environment and its associated problems, aware of how to help solve these problems, and motivated to work toward their solution.” (Stapp et al., 1969)
4. Environmental Sensitivity: a feeling of empathy for or an understanding view of the environment (Hungerford, H., Litherland, R., Peyton, R., Ramsey, J., and Volk, T., 1992).



5. Family program: a single day or overnight activity-oriented environmental event created for parents, either one or both, to participate in with their children.
6. Free choice learning: the type of education that occurs when people choose to learn about a topic or participate in a program (Heimlich, 2005).
7. High rate of participation: public involvement in an event sufficient to pay all overhead costs, and make the organization money, if that was the intent of the program.
8. Intergenerational Influence: the act of knowledge being passed from younger generations to older generations, or from older generations to younger generations.
9. Preschool aged: a child that is four to five years old.
10. Successful program: an event that is financially sound, is replicable, accomplishes the objectives specified for it and results in a high rate of attendance, enjoyment, information gained, intention to participate in additional events, and ability to increase environmental sensitivity.

## **F. The Assumptions**

1. The instructors are effective in their teaching and use creative learning techniques during the programs.
2. There are a wide range of environmental education family programs being offered throughout the country that may offer insight and ideas as to what would make up a successful family program.
3. There are sufficient central Wisconsin parents interested in participating in environmental education programs at the CWES with their children.

4. Preschool family programs can effectively address the goals and objectives of environmental education.

## CHAPTER TWO

### Outline of Chapter Two – Review of Related Literature

- II. Review of Related Literature
  - A. Introduction
  - B. CWES Programming
  - C. Environmental Sensitivity
  - D. Non-formal Environmental Education
  - E. Family Programs
  - F. Intergenerational Influence
  - G. Early Environmental Education
  - H. Program Development
  - I. Program Evaluation
    - 1. Observations
    - 2. Interviews
    - 3. Focus Groups
    - 4. Surveys or questionnaires
    - 5. Authentic Assessment
    - 6. Analysis of Results
  - J. Summary

## II. Review of Related Literature

### A. Introduction

In this related literature review many topics are discussed. First, the importance of non-formal environmental education programs and, more specifically, family programs is examined. Second, but very closely related to the first, the idea of intergenerational influence is examined. The review also considers the importance of early childhood environmental education. The last two topics are the development and then evaluation of non-formal environmental education programs.

## **B. CWES Programming**

The Central Wisconsin Environmental Station (CWES) is a field station of the University of Wisconsin – Stevens Point, College of Natural Resources. The CWES officially became a non-formal residential environmental education facility in 1975. Before that the land and buildings were used by the boy scouts as Camp Chickigami. The CWES 300-acre property is located on Sunset Lake. From the beginning the CWES has been focused on teaching environmental issues and an understanding of the natural world to students and adults of all ages. The mission of the CWES is “to foster in adults and youth the appreciation, understanding, skill development, and motivation needed to help them build a sustainable balance between environment, economy and community” ([www.uwsp.edu/cwes](http://www.uwsp.edu/cwes), 2007). This facility achieves this mission in many ways. The College of Natural Resources Practicum Programs helps to train and mentor undergraduate and graduate students in how to be environmental educators. The staff at the CWES works hard to provide “innovative environmental education experiences based on ecological principles, integrated natural resource management philosophies, balanced perspectives, and inquiry-based methodologies” ([www.uwsp.edu/cwes](http://www.uwsp.edu/cwes), 2007). These programs, both day programs and residential, are provided to K-12 students from all around Wisconsin. The CWES also reaches out to the public through several public programs held each year. In the past these programs have included a Halloween Hoot N’ Howl, SnowShoe Owl Prowl, Summer Camp Sampler, and Open Houses.

The CWES Summer Camp is also a major component of the current programming. These camps, for children ages 5-17, include day camps, week long residential camps, tripping

camps, family weekend camps, and a Natural Resource Careers Workshop for high school students. Each camp has its own theme with different activities and age requirements. These camps focus on providing the campers with a fun experience in the outdoors while at the same time helping them to grow into responsible citizens with passion and empathy for the outdoors. Campers are given instruction in areas like archery, fishing, canoeing, kayaking, camping, outdoor cooking and fire building. The campers also spend a great deal of time playing games, doing arts and crafts and recreating at the large waterfront area on Sunset Lake.

The CWES also opens its doors to other contract groups and organizations that need a place to have a large meeting, a place to stay for a few days, host a reunion or a wedding. Though most of these visitors are not provided with any specific environmental programming they are all provided access to the property, trails and facilities for them to enjoy and experience on their own.

Between all the different types of programs that the CWES offers and the rentals by contract groups the CWES reaches a large audience. In 2006 the CWES had 7183 visitors to the grounds and this number grew by almost 1000 from the previous year.

### **C. Environmental Sensitivity**

The Tbilisi Declaration states that one of the basic aims of environmental education should be to enable citizens to “acquire the knowledge, values, attitudes and practical skills to participate in a responsible and effective way in anticipating and solving environmental problems” (UNESCO, 1977). The values and attitudes portion of that statement has been cause for a great deal of research. It seems clear to most environmental educators that in order to get

people to make responsible environmental decisions there are certain values and attitudes that are needed first. Using the goals and objectives for environmental education specified by the Tbilisi Declaration Hungerford and Volk went on to define exactly what an environmentally responsible citizen would look like. The first quality they included was “an awareness and sensitivity to the total environment and its allied problems” (Hungerford and Volk, 1990). This sensitivity later becomes defined as a feeling of empathy for or an understanding view of the environment (Hungerford, H., Litherland, R., Peyton, R., Ramsey, J., and Volk, T., 1992). Hungerford and Volk identified this environmental sensitivity as a major variable at the entry level for creating environmentally responsible citizens. According to Hungerford and Volk, “Entry level variables are good predictors of behavior or ones that appear to be related to responsible citizenship behavior” (1990). Understanding just what instills this environmental sensitivity into citizens has become an important area of research.

Sivek and Hungerford began to determine what factors may possible contribute to the creation of environmental sensitivity and responsible behavior in a study done in Wisconsin in 1989-1990. “Major precursors for sensitivity include variables associated with the out-of-doors and activities related to the arena” (Sivek and Hungerford, 1989-1990). In this study outdoor family activities was indicated by respondents of surveys as the second most influential factor in developing environmental sensitivity (Sivek et al. 1989-1990). “It also appears that the nonformal sector holds considerable promise for the development of sensitivity if it can capture learners for long periods of time and put them into aesthetically positive situations” (Sivek et al. 1989-1990). This is an important finding because it shows just how much potential family

programs at nonformal environmental education facilities have to increase environmental sensitivity.

In 2002 Sivek looked again at predictors of environmental sensitivity and responsible behavior. This study confirmed what had been done by others in this area that outdoor experiences and role models are the two most important factors in creating environmentally sensitive adults (Sivek, 2002). However, Sivek discovered that for high school students in Wisconsin the role models were more often teachers than the students own parents. This is in contrast to what had been found in earlier studies (Sivek, 2002). This finding is important because it shows that parents have room to increase the amount that they are involved and influencing the level of environmental sensitivity displayed in their children. Family programs could be another way for parents to become more active and involved with the development of environmental sensitivity.

#### **D. Non-formal Environmental Education**

The importance of non-formal environmental education is a continuous topic of research and literature. One thing that does change slightly is the name that the authors give to the type of education that is taking place. Free-choice learning is one of the newest titles to emerge from the literature. This term refers to the type of education that occurs when people *choose* to learn about a topic or participate in a program (Heimlich, 2005). This title fits perfectly with family environmental education programs, in which parents and children decide whether or not to attend. Free choice learning happens in many places, is organized by many different groups, and should be considered just one part of environmental education (Falk, 2005). Free-choice learning can take place in many areas where people may not think education is the reason for

their visit, such as zoos and aquariums, but where information does actually reach a considerable number of people. Studies have been done to show the importance of this type of learning (Falk, 2005). One such study was done in Washington D.C. involving a traveling exhibition called “Biodiversity 911: Saving Life on Earth” (Storksdieck, Ellenbogen and Heimlich, 2005). The study involved “pre- and post-exhibition visit interviews” (Storksdieck et al., 2005) to see how visitors attitude’s about their own personal actions dealing with biodiversity and global actions changed after experiencing the exhibition. The results of the study showed that after the exhibition the visitors attitudes about their personal actions changed, and they felt more strongly about how effective their actions could be. Three of the personal actions that the people were questioned about were “stop using pesticides on my garden and lawn”, “reduce my car use”, and “eat more environmentally friendly foods” (Storksdieck et al., 2005). The percentage of people that were willing to take personal action to help biodiversity before experiencing the exhibition was 41%. This number jumped to 71% when the people were interviewed after the exhibition (Storksdieck et al., 2005). The research seems to show that free-choice learning has the power to educate and to change attitudes and influence behavior.

Another conclusion from studies done in free-choice learning has been that free-choice learning should be combined with all of the other forms of learning, and that, especially when dealing with environmental issues, this combination is the best way to effectively reach a wide population (Falk, 2005). Just one part of the system alone would not be enough to be truly effective at creating a population that is educated on environmental issues and has a love for the outdoors. It requires all of the different facilities and organizations working together (Falk, 2005). Another point stated throughout the literature is that environmental awareness and



learning is something that has to continue far beyond where schooling stops (Ballantyne and Packer, 2005). Free-choice learning is seen as an avenue through which this can be achieved. By combining learning that happens in schools with different types of free-choice learning “we equip individuals not only to adopt environmentally sustainable attitudes and behaviors, but to continue exploring and developing their relationship with the environment throughout their lifetimes” (Ballantyne and Packer, 2005). Free-choice learning is also seen as having the ability to keep information about the environment “up-to-date and personally relevant” (Falk, 2005). It is important to continue studying the idea of free-choice learning because it is what and how the public is learning. If environmental educators want to continue to reach a large portion of the population, it may be necessary to become aware of what the people are actively pursuing.

### **E. Family Programs**

Family programs can benefit many environmental education program or center because of the specific type of influence that they can have on children and their families. Programs that include a parent make reaching the child easier for several reasons. “For the children having an adult with them gives them the confidence to try new things, to interact with the adult, and to experience interactions with other children” (Oltman, 2002). Active learning experiences that occur at environmental education centers are dependent upon parents being supportive and encouraging to their children (Hohmann and Weikart, 1995). With supportive parents present children can sometimes feel more secure, comfortable and eager to learn (Hohmann and Weikart, 1995; Oltman, 2002). Improving the learning environment by making the students more comfortable, especially for younger aged children, is always beneficial. Family programs can

also be an asset to parents that wish to pass on certain values, attitudes, or just a love for the outdoors. “Children, when in the company of a caring adult, are in the best possible setting for gaining a life-long reverence for the natural world” (Oltman, 2002). When parents choose to attend these programs with their children, a real message is being sent about what they value and the kinds of values they want their children to have. The education and awareness that children are receiving at school is certainly essential, but the family is still where main values are created. It is within their family that the child will first be receptive to becoming interested in and gain an appreciation for the environment during the very early part of their life (Kola-Olusanya, 2005). There is no doubt from the current literature on this topic that involving parents in certain environmental education programs can be a benefit for everyone involved (Oltman, 2002; Kola-Olusanya, 2005).

## **F. Intergenerational Influence**

Environmental education family programs are also important because they allow for intergenerational influence. This is the idea that different generations of people can learn valuable lessons from each other. One such form deals with the idea that once students have learned something, either in school or in a non-formal setting, they have the ability to pass that knowledge along, making the original program much more effective. “It is contended that the process of intergenerational influence whereby school students act as catalysts of environmental change among their parents and other community members could be a powerful but, as yet, untapped means of addressing current environmental problems” (Ballantyne, Connell, and Fein, 1998). In one specific study it was found that about half of students participating in

environmental education programs bring home to their family a message, possible behavior change, or action that could be taken that they learned from that program (Ballantyne, Packer and Fein, 2000). This could also be achieved through homework that the children are asked to do following a school program that requires them to have discussions with parents or grandparents (Liu and Kaplan, 2006). Once the children have altered their mind set, it is likely that they will try to convince, or change, the behaviors and attitudes of their parents (Ballantyne et al., 1998).

A study done by Shih-Tsen Liu placed senior adult volunteers into an environmental school program to determine if the inclusion of another generation would change the amount of attitude change or knowledge gained by the students that were involved with the intergenerational program (Liu and Kaplan, 2006). The seniors were asked to participate fully in the program and interact with the younger students as much as possible. The qualitative data gathered from the study showed that the younger participants “were more appreciative of natural resources, expressed more determination to care for the environment, and gained more information on topics such as plants, animals, and historical events” (Liu and Kaplan, 2006) when compared to other students participating in the same program without the intergenerational component. The quantitative data that were gathered also showed that there was a larger positive change in environmental attitudes and knowledge gained with the students that had an intergenerational component than with those that did not (Liu and Kaplan, 2006).

The way that intergenerational influence has been described thus far places the parent or grandparent in a passive learner role where their knowledge and life experience is not being used to educate the younger generation. Family programs would allow for all generations involved to

be both learners and educators. The parents or grandparents would have the ability to pass along their knowledge of the topics and encourage their children in topics that they themselves are interested in. Even when the program is over the intergenerational influence may continue with later discussion between the parent and child of what was learned or experienced at the program, participation in future programs, or action in household or community issues.

### **G. Early Environmental Education**

Family environmental education programs are important at any phase of a child's life, including the very early stages. Research shows that early childhood education relies quite a bit on concrete, first-hand experiences in order to be truly effective (Ginsburg and Opper, 1969; Gullo, 1992; Hohmann and Weikart, 1995; Lee and Ma, 2006; Oltman, 2002). Jean Piaget's theory of development supports this idea that in early childhood there is a need for immediate contact with objects that the children are learning about (Ginsburg and Opper, 1969).

Environmental education is an ideal fit for this type of learning because many nonformal programs are designed around allowing the student to actually get out in nature. Outdoor education settings that actually take the students into nature have an unlimited amount of educational opportunities (Oltman, 2002).

These types of experiences, involving face-to-face contact with the natural world in a positive way are critical when trying to create students who have awareness and an appreciation for the outdoors. These experiences need to occur early in life so that these attitudes can be formed (Carson, 1956; Oltman, 2002). Forming these attitudes at such an early age is important because the students will have a better chance at becoming committed and truly interested in

environmental issues and awareness (Regnier, Gross and Zimmerman, 1992). The idea that four to six year olds, or preschool children, are too young to handle this type of information is not accurate according to current studies (Palmer, Suggate, and Mathews, 1996). In Palmer's study four to six year olds were asked questions about distant animals and environments; the children's responses showed that values and attitudes were already developing. When asked about the topic of cutting down trees, many children brought up ideas about the necessity of the rain forest. The students made comments about how it was bad to cut down trees and even made references to the results of deforestation. The responses in this study showed that the students understood the value of rainforests (Palmer, 1996). Palmer concluded that even four-year-olds have the ability to excel at grasping simple environmental concepts and already have a base knowledge that can be built upon in formal education (Palmer, 1996). A family environmental education program could lend itself very easily to the learning styles of such young students.

## **H. Program Development**

The development of non-formal environmental education programs is an involved process with many aspects to consider. Environmental education programmers often times cannot be sure of the attitudes and beliefs that their audience will bring with them and should understand that even within one community the opinions can be greatly diverse (Washington, 1992). The program will be most successful if truthful and accurate information can be presented to the audience as a whole, not focusing on one belief or opinion (Washington, 1992). Developing a public program is difficult because the people attending will not all have the same background, the same education or the same opinions. A program's success relies on the ability

to anticipate a diverse audience and be ready for anything. There are ways of gaining information prior to the program which may help alleviate some of the surprises. By doing some information gathering on what the audience may know about the topic and what the range of opinions may be toward the issue, the program can be designed to build on what is already known and not just reiteration (Washington, 1992).

As stated in the previous section, when designing an environmental program for children, it's important to understand the developmental stage of the children and then develop the program accordingly (Regnier et al., 1992). A program that is designed for a certain stage of thinkers will lead to the children understanding what is presented and result in a greater likelihood that they will remember what they learned (Oltman, 2002). Another benefit is that “there are fewer struggles to get children to engage in the program. Material presented in a developmentally appropriate manner is more interesting to students and naturally grabs their attention” (Oltman, 2002). Knowing the audience's prior knowledge and attitudes and understanding the developmental stage at which your audience belongs to are just two of the many aspects of developing a successful family program. Unfortunately, there is a lack of available literature on other potential problems to consider, or steps that should be taken when developing an environmental education program, specifically a family program.

## **I. Program Evaluation**

Evaluation is an important aspect of creating and implementing an environmental education program. Evaluating an educational program has many benefits for the program and for the instructor of the program (Bennett, 1984). The evaluation can identify program

accomplishments, but can also identify if there are any issues that need to be addressed, or parts of the program that need to be changed (Marrell and Bixler, 2003). Benefits to the instructor include insight about teaching methods that may improve the program in the future (Bennett, 1984; Marcinkowski, 1993; Wiltz, 2001). Also, by doing an evaluation, the instructor is seen by others in the field as someone who wants to improve their teaching skills and cares about their effectiveness (Bennett, 1984). Students also benefit from the evaluation, as it will improve the teacher's knowledge about the students and help to improve the teacher's abilities (Bennett, 1984). Successful evaluation comes from knowing what the goals of the program are to begin with and forming the evaluation based on what those goals are (Bennett, 1984; Marcinkowski, 1993; Moorcroft, Desmarais, Hogan, and Berkowitz, 2000; Wiltz, 2001). "Instead of allowing measurement to drive outcomes to determine a sense of program value, good evaluation of environmental education will have that which we value in our programs driving our desired outcomes, and those outcomes determining measurement" (Wiltz, 2001).

The steps to evaluation begin by determining the aspects most crucial to evaluate (Bennett, 1984). This is why knowing the goals or objectives is so important, because it makes identifying the aspects that need to be evaluated much easier (Bennett, 1984; Chenery and Hammerman, 1984; Moorcroft et al., 2000). From these goals and objectives evaluation questions can be developed that will guide the whole evaluation process. Evaluation questions "indicate the scope of the evaluation and can communicate to stakeholders and other audiences the focus of the evaluation" (Russ-Eft, 2005). The evaluation questions are not the same questions that will be asked during interviews or on surveys, they are broader and "more

comprehensive” which will guide what tools are used and what questions are asked during the evaluation process (Russ-Eft, 2005).

Once the goals and objectives of the program have been determined and the evaluation questions developed, the next step to evaluation is constructing the evaluation tool and then implementing that tool (Bennett, 1984). In formal environmental education, assessments, or cognitive tests, are often used for evaluation purposes (Wiltz, 2001). Other forms of evaluation also exist. “Formative evaluation is something we often do every day informally as we observe participants reactions, test out a new activity, or count the number of participants in our program” (Wiltz, 2001). A study done by Mary Faeth Chenery and William Hammerman (1984) found that the top four most commonly used forms of evaluation of resident outdoor education programs were 1) observations of the programs, 2) group discussions with participants, 3) individual discussions, and 4) written survey questionnaires. The same study also reports that the program aspects that are evaluated are “students’ overall satisfaction with the program, teachers’ overall satisfaction with the program, ‘operational’ aspects of the program, students’ attitudes toward the environment, and students’ attitudes toward others” (1984). However according to Chenery and Hammerman, most programs only perform an evaluation at the end of the group’s stay, and not throughout the program (1984). Having a full understanding of the different types of evaluations and how they differ is important in knowing which should be used in certain situations.

### **1. Observations**

Observations are a frequently used form of evaluation in environmental education. By directly observing the operations or activities of a program the evaluator is provided “with an



opportunity to collect data on a wide range of behaviors, to capture a great variety of interactions, and to openly explore the evaluation topic” (National Science Foundation, 1997). Especially in qualitative studies this form of evaluation is useful because qualitative data are “most often people’s words and actions” which can be understood more easily through direct observation (Maykut and Morehouse, 1994). One of the major benefits to observational evaluations is that it allows the evaluator to witness the setting and behaviors that are occurring. A clearer or more detailed picture can be drawn of the setting than what could be obtained through other evaluation methods such as interviews (Patton, 1997). Another benefit of observations is that by actually witnessing the setting and behaviors of the people the evaluator may notice or see things that a participant may not have considered important (Patton, 2002). Although there are many benefits to doing observations as a part of the evaluation process, there are also drawbacks to this type of data collection method.

One such drawback is how labor-intensive observations can be for some researchers (Patton, 2002, Maykut and Morehouse, 1994, National Science Foundation, 1997). The observer may have to use a great deal of time and energy to complete a full observation. A second drawback to using observations as an evaluation tool is that the presence of the evaluator in the program may directly affect the behavior of the participants (National Science Foundation, 1997). This can be difficult if not impossible in some situations to overcome. Another drawback may be the actual recording of the data being gathered during the observation (Leedy and Ormrod, 2005). The amount of detail that is needed to capture all of the information that is being gathered in an observation can be daunting.

## 2. Interviews

The main point to conducting an interview is to determine information about people “that we cannot directly observe” (Patton, 2002). An interview used for the purpose of evaluation of a program typically aims “to capture the perspectives of program participants, staff and others associated with the program” (Patton, 2002, National Science Foundation, 1997). This would not be information that could be obtained through observations or even typically through questionnaires. Interviews can be informal, organized more like a casual conversation, or they can have a strict question-and-answer structure (Leedy and Ormrod, 2005). In the latter type of interview the interviewer “asks all respondents the same series of preestablished questions” (Fontana and Frey, 2000). One downfall to this type of interview is that there is little flexibility; the interviewer is often given strict instructions and guidelines (Fontana and Frey, 2000). However, because the questions are the same for every participant, the information gained is easier to analyze from the structured interviews because the responses can more easily be compared than responses from unstructured interviews (Leedy and Ormrod 2005). One benefit of the informal interviews is that the conversation can go wherever the interviewee directs it, and the interviewer may be much more likely to get honest information stated in the interviewees own words (National Science Foundation, 1997).

Overall interviews, no matter which style is used, can have advantages and disadvantages. Interviews can yield very rich information, new ideas, and new perspectives on old ideas which can all be very beneficial to evaluations (National Science Foundation, 1997). Interviews also have the advantage of giving the interviewer the opportunity to explain interview questions, ask follow-up questions to clarify what the interviewee is stating, and add questions

throughout the interview if something interesting comes up, none of which is possible through the questionnaire format (National Science Foundation, 1997). The main disadvantage of interviews, like observations, is just how time consuming doing multiple interviews can be for the staff that is doing them (National Science Foundation, 1997).

### **3. Focus Groups**

A focus group can be explained as a strategically organized and well-planned discussion with seven to ten participants to gain information about a specific topic that is predetermined (Krueger 1988). When time is limited for an evaluator or researcher, focus groups can be useful because the format is allowing the researcher to basically interview several people simultaneously (Leedy and Ormrod 2005). According to the National Science Foundation there are certain things that the evaluation method of the focus group can be useful in discovering including, “identifying and defining problems in project implementation, identifying project strengths, weaknesses, and recommendations, assisting with interpretation of quantitative findings, obtaining perceptions of project outcomes and impacts, and generating new ideas” (1997). Focus groups are not only an effective way to find out preferences and opinions from people about a topic, but they are also a great way to find out the way people feel about a topic and why they feel that way (Krueger 1988). Focus groups can work better than other surveying techniques because they provide people with the opportunity to discuss with others how they feel about a topic, and possibly form their opinions at that time (Krueger 1988). “The hallmark of focus groups is the explicit use of the group interaction to generate data and insights that would be unlikely to emerge without the interaction found in the group” (National Science Foundation, 1997).

#### **4. Surveys or questionnaires**

Surveys are one of the most popular and widely used methods of data collection in evaluation and other areas of research (Henry, 2005). “Conducting a survey is a low-cost way and relatively straightforward way to obtain data from many people in a short period of time” (Henry, 2005). In their most basic form surveys are quite simple: “A researcher poses a series of questions to willing participants; summarizes their responses with percentages, frequency counts, or more sophisticated statistical indexes; and then draws inferences about a particular population from the responses of the sample” (Leedy and Ormrod, 2005). One of the major disadvantages to surveys is that the researcher is relying on the individual taking the survey to report information about themselves accurately (Leedy and Ormrod, 2005). Gathering information that accurately reflects the attitudes and behaviors of a large population through the use of survey research can be difficult (Henry, 2005).

#### **5. Alternative Assessment**

Alternative assessment, also known as authentic assessment, is an evaluation method that takes on the task of trying to evaluate students’ understanding and skills in real-world situations (TeacherVision, 2006). This type of evaluation “usually includes a task for students to perform and a rubric by which their performance on the task will be evaluated” (Mueller, 2003). Alternative assessment is much more performance based, dealing with writing stories, creating some kind of product, or doing a performance of some kind, than other forms of evaluation (TeacherVision, 2006). Instead of a pencil and paper exam to show skill or concept understanding, students may have to perform a “rite-of-passage” in order to move on to another

topic (Hart, 1994). These types of experiences may include some kind of performance, exhibit, oral presentation, products, artwork, or portfolios (Hart, 1994). Research notes numerous benefits to using this type of evaluation method. Encouraging creativity, reinforcing real-world problem solving and skills, building oral and written skills, and the ability to directly link assessment, instructional activities and the learning objectives, are just a few of the discovered benefits (Mandarnach, 2003). Most of these benefits draw from the idea that this type of evaluation is performance based, requiring the students to use the knowledge they have gained to create or do something that reflects that knowledge gain.

When compared with more traditional methods of assessment, alternative assessment does have some drawbacks or disadvantages. Because many teachers are not as comfortable with using this method, the development and implementation can be much more time intensive, and require more planning (Mandarnach, 2003). In a school system that is focused on standards, grades, and test scores, it can be difficult to incorporate authentic assessment methods into the curriculum (Mandarnach, 2003). Other noted disadvantages include, “subjective nature or grading may lead to bias, unique nature may be unfamiliar to students, may not be practical for large enrollment courses”, and “challenging to develop for various types of courses and ranges of objectives” (Mandarnach, 2003).

## **6. Analysis of Results**

The last step in the evaluation process is analyzing the results and then using them to better the program and the effectiveness of the instruction (Bennett, 1984). Chenery and Hammerman (1984) discovered that most outdoor education centers and program staff uses the evaluation to improve the program and to improve the program staff, and after that to plan for

future programs. The process of evaluation, whatever kind is used, can increase the success of a program and enable instructors to more effectively reach their target audience. For this reason, it is a vital part of environmental education (Bennett, 1984).

## **J. Summary**

This review has covered many topics related to this project and just scratched the surface as to how they will contribute. The development of a family environmental education program is needed and important because it will take all of the ideas and information presented and bring them together in one project. The hope for this project is to build on what has been discovered and add to the wealth of knowledge that is currently available about non-formal environmental education programs and family environmental education programs.

# CHAPTER THREE

## Outline of Chapter Three – Methods

### III. Chapter Three – Methods

- A. Introduction
- B. Objective One
- C. Objective Two
  - 1. Focus Group
  - 2. Open-ended Survey to Parents
  - 3. Second Survey to Parents
  - 4. Pilot Test
  - 5. Reminder Letter
- D. Objective Three
- E. Objective Four
- F. Objective Five
  - 1. Observation Evaluation
  - 2. Alternative Assessment Tool
  - 3. Post-Program Interview
  - 4. Post-program Questionnaire
  - 5. Development of Evaluation Tools

## III. METHODS

### A. Introduction

The purpose of this study was to develop, implement and evaluate a family environmental education program for the Central Wisconsin Environmental Station. The program was designed for preschool aged children, three to five years old, and their parents. In order to do this effectively, data are needed from a variety of sources. The data needed included examples of the types of family programs being offered at environmental education centers throughout the country, information about what parents of preschool aged children in the central

Wisconsin area desire in a family environmental education program, and the opinions of the people who attended the program on how effective and enjoyable the program was.

## **B. Objective One**

*Objective one: The first objective was to identify and examine for content and effectiveness environmental education family programs used in selected centers throughout the country.* The data collected to resolve this objective came from a variety of environmental education family programs currently being offered throughout the country. This does include, but is not limited to, the goals and objectives of these programs, evaluations conducted by the program staff, topics or content, specific activities, length of time, cost and age range of participants. These data were collected by first compiling a list of well established and reputable centers throughout the country. The list was developed through consultation from my advisor and members of my graduate committee. General information about the centers and the programs that are offered at these centers was gathered through internet searches, gathering brochures and other advertising materials. Once this initial information gathering took place, informal telephone surveys were done of certain centers to obtain more specific information about specific family programs that were directly relevant to the study. These phone interviews were only done when the pertinent information could not be gathered through the advertising information. No set interview tool was used. Specific questions for individual centers or programs were developed based on what information could not be gathered initially. For example, a question was asked more than once about the types of activities done at various programs. If the same program was offered consecutive years, like in a camp setting, the director was asked if the same activities were done every year. Other main questions that were



asked pertained to whether or not learning objectives were set for the programs and whether or not the programs were evaluated. These data were compiled over several months. From the gathered information, combined with information gathered from objective two, decisions were made about possible content areas, activities, cost and length for the environmental education family program to be developed for CWES.

## **C. Objective Two**

*Objective two: The second objective was to determine the features of family programs that parents in central Wisconsin would want to see offered at CWES.*

### **1. Focus Group**

The data needed to resolve this objective were supposed to come from a focus group and a survey of preschool parents in the central Wisconsin area about what they want in an environmental education family program. The focus group was to have been conducted with a group of parents who have children ages four to five that are currently attending the Geselle Institute at the University of Wisconsin, Stevens Point. The director of the Geselle Institute, Lorrie Richardson, helped in attempting to acquire volunteers for the focus group by sending out a letter to the parents asking them to participate. The focus group was to be held on the UWSP campus in April of 2006. However, even after several attempts through letters, and requests from Lorrie Richardson no parents showed up at the focus group time and location. The decision was made with the help of my advisor and Lorrie Richardson that parent schedules were just too busy at the scheduled time to participate in a focus group. At this point, the focus group questions were re-written in the form of a survey. The survey would gather much of the same

information as the parents at the focus group would have given. The information on how the focus group questions were developed, and what would have been asked of the parents at the focus group is included in Appendix A.

## **2. Open-ended Survey to Parents**

The first survey (see Table 1) was created using the questions that were supposed to be asked during the focus group. The survey needed to be short and simple so that parents with tight schedules would be able to take just a few minutes to answer the questions, but in-depth enough that it would gather similar information that would have been gathered through the focus group. The questions for the survey were all open-ended questions to allow the parents some freedom with their responses and to get more detail from the answers. The questions from this survey are listed below.

Table 1 – Open-ended Survey to Parents

- 
1. What does your preschool age child/children enjoy doing outside?
  2. Think back to the last time you spent time outside with your child. Describe that experience and what you and your child did.
  3. Were there other children involved with this experience, either related, or not related?
  4. What outdoor concepts, or objects, such as insects, animals, plants, the soil, etc. do you find your child to be most interested in?
  5. How long do you feel that specific interest (mentioned in your answer to #4) can hold your child's attention at any given time?
  6. What resources, if any, have you sought out, or would you seek out, to help encourage your child's interest, or help them to learn about the interest (mentioned in your answer to #4 and 5)?
  7. Think about a family environmental education program based on that topic of interest (mentioned in the previous three answers). What would you want your child to do at that program or learn about at that program?

8. How do you feel a family environmental educational program designed for your preschool child would benefit you as a parent?
9. Is there anything else you would like to add on the topic of environmental education family programs?

---

The first question was meant to find out what parents of preschool children are noticing their children naturally enjoy doing outside. This will provide a general idea of what types of activities, or content would be appropriate for a family program, and then these ideas will be listed or asked about on the second survey. Question number two was trying to get the parents to describe in a little more detail what their child does when they are outdoors, and to what extent they are involved with their child's outdoor play. The third question is trying to find out if their child plays with other aged children, either siblings or friends. This may guide some of the scheduling options for the program that could be asked about on the second survey, as to whether different programs are designed for different age levels. Question four is related to topics or content for the program. From the responses to this question a list was made of possible topics to be used for the family program. This list was then included on the second survey to determine exactly what topics the parents were interested in seeing presented at a family environmental education program. The next question, question five, is a follow-up question and is trying to determine about how long this age level of children enjoy and stay interested in one activity. Again this question is tying back to the fourth question and trying to figure out how much the parents encourage their child's interest and what they have done to encourage the interest. The seventh question is trying to seek specific guidance from parents about what they feel should be included in a family environmental education program. This question will help to determine if the parents want hikes, arts and crafts, games, stories or any other type of activity to be involved

with a program designed for their child. The eighth question focuses on the parents and not the child, trying to determine what benefit if any the parents feel they would get out of a family program. This question may help in how to market the program, providing insight as to what exactly the parents are hoping to get out of the event, not only for their children, but for themselves as well. The last question is simply allowing the parents an opportunity to add any additional opinions or guidance they may want to about family programs.

The survey was given out to two teachers to hand out to the parents that had children at their preschools. Each teacher was given enough copies of the survey, informal information letter to the parents, consent form required by the Institutional Review Board and the prize drawing slip for each parent at their school. To view the actual letter, consent form, survey and prize drawing that was sent out to parents see Appendix B, B1, and B2.

### **3. Second Survey to Parents**

The information gathered through the first survey was used to develop the second survey (see Table 2 – 7 within the text, or Appendix C2) that was sent out to parents at other preschools and daycare facilities throughout central Wisconsin. The survey was designed to provide specific information about what parents would want in an environmental education family program. The questions are specific in detail and focus. Possible question topics include the amount of money a family would be willing to pay to attend a family environmental education program, and the distance that a family would be willing to travel to attend a program. The survey questions were reviewed by fellow graduate students and the graduate committee members in order to ensure the validity of the instrument, and it was also reviewed by the Institutional Review Board. To increase the return rate of the survey, preschool teachers were

contacted at schools to see if they would be interested or willing to pass out the survey to their parents. Receiving the survey from a familiar person such as the teacher might make the parents more inclined to return the survey. A letter was written to each teacher that was included with the surveys explaining the survey further to the teachers (see Appendix E).

The survey questions were broken down into sections to make it easier for the respondent to follow the topic of the questions, and understand exactly what was being asked. The first section of the survey (see Table 2), “General Questions”, is basic demographic questions trying to get some general information about the population responding to the survey. The data collected from this section were used to decide if there are any patterns in the responses about what parents want in a family environmental education program based on demographic information. The development and inclusion of these specific questions was decided on by looking at other master’s theses that did large survey populations and what demographic questions were generally used, and by consulting with my graduate advisor. The last two questions were more specific for this research and were trying to gather some very specific information about this population. Question seven is trying to find out if they have ever been to the Central Wisconsin Environmental Station before. If they have been there before their answers may be different because they are somewhat familiar with what is already being done there, than a person that has never been there before. The last question, question eight, is also specific to this research and is attempting to discover if they are already attending environmental education family functions in their area. This may change how they answer the rest of the survey questions because they are familiar with how other facilities are designing programs. This will

also show if they are already interested in these types of programs and generally how popular environmental education family programs seem to be in this area for this age level of children.

Table 2-Section 1 – General Questions Section of Second Survey

---

**General Questions**

1. What is your gender?  Male  Female
  
  2. Please indicate the size of the town or area in which you and your family live.  
 Over 50,000 residents  
 40,000 – 49,999 residents  
 30,000 – 39,999 residents  
 20,000 – 29,999 residents  
 10,000 – 19,999 residents  
 Under 9,999 residents  
 Unincorporated village  
 Rural area or farm
  
  3. Please indicate how many children you have.  
 One child  
 Two children  
 Three children  
 Four children  
 More than four
  
  4. What are the ages of each of your children?
  
  5. What type of school do your children attend?  
 Public  
 Private, non-church affiliated  
 Parochial  
 Home-schooled
  
  6. How old are you?
  
  7. Have you, or your children, ever attended a function at the Central Wisconsin Environmental Station before?  
 yes  no If yes, please describe.
  
  8. Have you, or your children, ever attended any kind of environmental education function before as a family? (guided hikes, animal demonstrations, bird watching classes, etc)  
 yes  no If yes, please describe.
-

The second section of the survey (see Table 3), “Content Related Questions”, asked the parents specifically about what topics they and their children would be most interested in attending a program developed around. The development of these questions, and the topic areas that were included in the questions came straight from the results of the first survey and what topic areas those parents felt were the most popular and the ones that their children were the most interested in. The two options listed in question nine are not only the top two content areas from the first survey but they also reflect the two different programming areas available at the CWES. The two questions in this section should provide a general idea of what area of the environment would be the most popular, and most highly attended for this age group of children.

Table 3-Section 2 – Content Related Section of Second Survey

---

**Content Related Questions:**

9. Would you be more interested in attending a program designed around?  
 Water  Forest
10. If a program were designed around one of these more specific topics which would you be most likely to attend?  
 Land animals  
 Aquatic animals  
 Land insects  
 Aquatic insects  
 Plants  
 Non-living topics; rocks, minerals, soil
- 

“Activity Related Questions” is the third section of the survey (see Table 4). This section, just like the second section was developed straight from the first survey and the responses that were given on that survey. The first question is trying to find out who the parents feel the program should be specifically developed for, and who they would want to be able to

attend the program with them. This is very important information to gather from a development and marketing standpoint, because the program would be very different if it is developed just for preschoolers and their parents or if older or younger siblings also have to be planned for. However, this question will also guide the feasibility of parents actually attending the program. If parents are not interested in attending a program for just their preschoolers, where they would not be able to bring children of other ages along, the attendance and overall success of the program would be greatly limited. The second question in this section is asking about specific types of activities and which the parents feel would be the most interesting for a family program. This question will guide a great deal of the program development as far as what types of activities are done to connect with the theme that the parents choose from the content section. The third and fourth questions in this section, questions 13 and 14, are addressing scheduling and logistics of the program development. These two questions are trying to see how parents would like to see the program formatted, and whether or not they want to have any interaction with other families or have activities organized in a way that they can have some separation.

Table 4-Section 3 – Activity Related Questions of Second Survey

---

**Activity Related Questions:**

11. Please rank (1 – most interested, to 5 – least interested) which of the following program formats you would prefer. A program for
- \_\_\_ just you and your preschool aged child where you participate in the activities together.
  - \_\_\_ just for you and your preschool aged child where there are separate educational programming for adults, and the children.
  - \_\_\_ your whole family where you participate in the same activities together throughout the entire program.
  - \_\_\_ your whole family where your children participate in separate age appropriate



activities the whole time.  
 \_\_\_ your whole family where your children participate in separate age appropriate activities for part of the time, and joint activities some of the time.

12. Please indicate how interested you think your child could be in the following activities.
- |                             | Very interested | Somewhat interested | Not interested |
|-----------------------------|-----------------|---------------------|----------------|
| Woodland hikes              | ___             | ___                 | ___            |
| Catching land insects       | ___             | ___                 | ___            |
| Catching aquatic insects    | ___             | ___                 | ___            |
| Swimming                    | ___             | ___                 | ___            |
| Fishing                     | ___             | ___                 | ___            |
| Boating                     | ___             | ___                 | ___            |
| Games                       | ___             | ___                 | ___            |
| Arts/crafts                 | ___             | ___                 | ___            |
| Playing in sand/soil        | ___             | ___                 | ___            |
| Looking for/at animals      | ___             | ___                 | ___            |
| Gathering/Collecting things | ___             | ___                 | ___            |
13. Would you and your child be more comfortable with  
 \_\_\_ Participating in one activity at a time with a structured time limit and an instructor that helps with the activity the whole time; or  
 \_\_\_ Activity stations where the child can choose which activity to do and how long to do it, but with limited guidance by an instructor other than the parent.
14. While participating in family program activities would you rather,  
 \_\_\_ participate in activities just with your family, or  
 \_\_\_ be mixed with other families participating in the same activity?

---

The “Time Related Questions” section (see Table 5) is focusing on when and how the family program should be scheduled. The section begins by asking about the general length of time they would like to see the program. Since the CWES does have residential facilities this is an option for developing a longer residential program or a day program could be developed as well. The second question is trying to find out how long the activities sessions should be planned for and exactly how long parents feel their children can handle or stay interested in something that they are doing. The answer to this question will not only guide the length of time of activities but also how many activities could possibly be put into different styles of programs.

The remaining three questions are gathering information about when would be the most convenient for parents to attend a family program including time of year, during the week or weekend, and finally morning or afternoon. These questions are very important from a marketing perspective to understand exactly when it is the best to plan these types of programs to make it the easiest of the majority of parents to attend.

Table 5-Section 4 – Time Related Section of Second Survey

---

**Time Related Questions:**

15. Please indicate which of the following program formats would work best for your family?
- |   | Work Best | Work OK | Not Work Well |
|---|-----------|---------|---------------|
| A half-day/several hour family program,           | ___       | ___     | ___           |
| A one day, one time family program,               | ___       | ___     | ___           |
| A series of day programs built on the same topic, | ___       | ___     | ___           |
| A weekend/overnight family program.               | ___       | ___     | ___           |
16. How long do you think your child would enjoy/be able to handle participating in one activity?
17. What would be the best time of year for a family program to fit into your schedule? (Mark all that apply)
- |              |           |               |              |
|--------------|-----------|---------------|--------------|
| ___ January  | ___ April | ___ July      | ___ October  |
| ___ February | ___ May   | ___ August    | ___ November |
| ___ March    | ___ June  | ___ September | ___ December |
18. Would you be more willing/able to attend a family program  
 \_\_\_ during the week or  
 \_\_\_ during the weekend?
19. Would you be more willing/able to attend a one day family program  
 \_\_\_ in the morning or  
 \_\_\_ in the afternoon?
-

Questions 20 and 21 were in the “Cost Related Questions” section (see Table 6) and asked parents to describe how much they are willing to pay for different types of programs, and what types of additional incentives they would like to see that would make certain programs more appealing. These two questions can greatly affect the rate of attendance of the program, and how profitable the program is for the CWES. Understanding exactly what parents are willing to pay for different types of programs and what other incentives would encourage their attendance can drastically change how programs are developed, marketed, and how successful the attendance rate is overall. The prices listed in the first question were taken from what other facilities around the country are currently charging for certain types of programs, and what the CWES would need to charge to still have profitable programs. Though there are only two questions in this section the responses are extremely important to the development and marketing of family programs.

Table 6-Section 5 – Cost Related Section of Second Survey

---

**Cost Related Questions:**

20. How much would you be willing to pay for a program? (Mark all that apply.)
- \$15 or less for a half day including programming.
  - \$15 or more for a half day including programming.
  - \$30 or less for a one day including programming, snack & lunch.
  - \$30 or more for a one day including programming, snack & lunch.
  - \$120 or less for a series of programs, 5 days, 2 hours each day, including programming
  - \$120 or more for a series of programs, 5 days, 2 hours each day, including programming
  - \$365 or less for a weekend including all programming, food and lodging
  - \$365 or more for a weekend including all programming, food and lodging
21. Which additional incentives, if included in the above costs, might make the program more appealing?
- Free t-shirt
  - Access to purchasing materials used during the program, such as equipment,

- \_\_\_\_\_ story books, teaching materials, etc.
  - \_\_\_\_\_ Hand-outs about related activities that could be done at home
  - \_\_\_\_\_ Take-home crafts such as bird feeders, bird houses, etc.
  - \_\_\_\_\_ Information about other places with similar programs, or other programs being offered at the same facility.
  - \_\_\_\_\_ Other, please describe. \_\_\_\_\_
- 

The last section of the survey, “General Program Development Questions” (see Table 7), contains an additional marketing question that could reveal critical information for how to reach the parents with advertisements and information about programs that have been developed. The responses from this question will directly guide how the program is advertised. Also, the responses could increase the attendance just by figuring out where parents of preschool aged children are most likely to see this type of advertisement, or where they are most often looking for this type of information.

Table 7-Section 6 – General Program Development Section of Second Survey

---

**General Program Development Questions:**

22. Which source would you be most likely to see an advertisement for an environmental education family program? (Mark all that apply)
- |                            |   |
|----------------------------|---|
| _____ Newspaper            | _____ Website; please indicate where, _____ |
| _____ Radio                | _____ Public bulletin board, location _____ |
| _____ TV                   | _____ Other, please describe, _____         |
| _____ Preschool Newsletter | _____                                       |
- 

After the survey was developed preschools needed to be contacted to find teachers willing to participate in the survey. By examining the current list of schools that attend programs at the Central Wisconsin Environmental Station, a list of potential towns and areas to look for preschools was developed. A list of preschools to contact was created, including public, private

and parochial schools. Initial phone calls were made to teachers explaining the research and the benefits to their parents. Finding teachers that were willing and able to participate was more difficult than was anticipated. Teachers are very hard to get a hold of and do not return phone calls very quickly. In many cases the teachers were not able to commit to the research without permission from either a principal or a board of education. In the cases where this permission was necessary no teachers were allowed to participate. Eventually five teachers were found that were willing to participate in the survey research. The teachers were instructed that they would receive a packet of surveys, and that they should distribute one survey to each parent. To see the entire survey and consent form that was sent out to the teachers see Appendix D1 and D2.

#### **4. Pilot Test**

Before the survey was sent out to a wide range of parents, a small group of surveys was sent out as a test run. These participants were asked to complete the survey, just as the subsequent wider population did later, but were also asked to answer a few questions on the survey itself. For example, they were asked if any of the questions were difficult to understand or easy to misinterpret. The trial run questionnaire also asked about the format of the survey, e.g. was there enough space to write? Also, the parents were asked what would be the best incentive to give parents to encourage them to return the survey. The whole trial run questionnaire is included in Appendix C. This first sampling helped to ensure reliability of the instrument and helped to determine if any questions needed to be changed before the survey is sent out again.

After the pilot test was done an informal information letter and prize drawing slip were created to go with the survey. The letter explained the research project to the parents. The

parents were told all of the benefits that they could be a part of by participating in the survey.

The prizes that the parents could be a part of were also explained, and then listed out on the prize drawing slip so the parents could choose which drawings to be a part of. The letter that was sent out to the parents and the prize drawing slip are included in Appendix D and D3.

### **5. Reminder Letter**

After the survey was sent out to the wider population, a reminder letter (Appendix F) was sent out to remind the parents of the benefits of returning the survey. This reminder letter would hopefully increase the number of parents that returned the survey.

Using the results from the first survey and the second, larger survey, combined with the information gathered from objective one, decisions were made about possible content areas, methods, activities, the mixing of different families, amount of involvement by naturalist, cost and length for the environmental education family program to be developed at CWES.

### **C. Objective Three**

*Objective three: The third objective was to develop a family program for CWES that reflects what parents asked for and adopts features of other successful programs.* The data needed to resolve objective three consist of examples of how to develop programs. This included ideas about developmental stages of preschool aged children, physical capabilities of preschool age children and appropriate steps needing to be taken to develop an effective program. These data are located in many sources which were reviewed and presented in the related literature review. The examination of other programs throughout Wisconsin that was

done for objective one also provided insight as to how effective programs are developed. The data for this objective were partly collected through library resources.

One of the main products developed from these data were the educational objectives, stating exactly what the program is trying to achieve and what information is to be presented. These educational objectives are crucial in determining the effectiveness of the program during the evaluation phase. The content of the objectives was based on what the parents stated they wanted to see a program developed around in the surveys. The objectives were developed during the UW-SP class Natural Resources 610 Applied Program Evaluation section 851. The development of the objectives followed strict guidelines presented by the instructor of the course and the objectives were reviewed by fellow classmates and the instructor of the course. To see the program goals and objectives see Appendix I.

Once the objectives were developed based on the information gathered from the parent survey and guidance from classmates and the instructor from NRES 610, the specific program format and activities began to take shape. In January of 2007 meetings were held with the permanent staff of the CWES to determine the amount of people, time frame, date and cost for the program. A list of volunteers that could be contacted to help with the implementation was also developed. The program format and specific activities were also reviewed by professionals in the field as a part of a validity panel and the graduate committee to ensure age appropriateness of activities and content of the program. This review process began in late January of 2007 and continued until early February of 2007 (For the complete thesis timeline see Table 9). The letter that was sent out to the validity panel and the validity panel instructions are included in Appendix J and J1.

## **D. Objective Four**

*Objective four: The fourth objective was to implement the family program that was developed.* The data needed to resolve objective four included lists of possible volunteers that have the experience to help with program implementation and their contact information, materials needed to implement the activities in the program, and names and contact information for other staff needed during the implementation of the program, such as program directors, kitchen staff and maintenance staff. These data were located through resources at the Central Wisconsin Environmental Station, such as lists of people who have previously volunteered. As the activities were developed, decisions were made regarding what materials were needed. The materials at the CWES were inventoried to see if anything needed to be purchased for the program. All expenses will be documented to create a post-program budget to help determine whether or not the program was financially sound. From this data collection, volunteers were secured for the family program and materials for the activities gathered.

## **E. Objective Five**

*Objective five: The fifth objective was to evaluate the family program to determine if the development and implementation were successful.* The evaluation of the family environmental education program was done through four methods.



## **1. Observation Evaluation**

An observation form will be used during the program. This observation form will be completed by an outside person, someone who was not directly connected to the development of the program, or with the research connected with this thesis. The observation form will help to determine how well the program was implemented, how age appropriate the activities were, how long the children and parents remained interested in the activities, and which activities the children and parents seemed to enjoy the most. These data will be vital to determining the effectiveness of the program. The observation form was sent to the volunteer conducting the observation before the program so that the observer had the chance to become familiar with the form ahead of time. On the day of the program the volunteers were given a chance before the program to ask any questions they may have about the evaluation forms. The observation evaluation form is included in Appendix N.

## **2. Alternative Assessment Tool**

An alternative assessment will be done with the families at the end of the program. This evaluation tool was the last activity of the program. The alternative assessment tool was a matching activity. Pictures and examples of the animals, their homes and food source were laid out in front of the children and they had to try and match the items to the correct animal. The activity started by having the children name the five animals they saw in the pictures and matching the animal to the description of their movement. Then the children were asked to match the animal with a picture of its home and an example of its food source. While the children were working on matching the items the rubric listed below in Table 8 was used to score the amount of knowledge gained by the children. This activity will help to show, in a creative

way, what the children learned from the program. The alternative assessment tool can be found in Appendix O.

Table 8 – Grading Rubric for Alternative Assessment Tool

**Forest Animal Matching Grading Rubric**

For each child participating in the activity fill out the grading rubric below. For each of the items in the criteria column place an “X” in the box to the right that indicates at what level that criteria was displayed.

<b>Criteria</b>	<b>Maximum Knowledge Gained</b>	<b>High Level Knowledge Gained</b>	<b>Medium Level Knowledge Gained</b>	<b>Minimal Level Knowledge Gained</b>	<b>Little to no Knowledge Gained</b>
<b>Animal Identification</b>	Able to identify all five animals	Able to identify four out of five animals	Able to identify three out of five animals	Able to identify two out of five animals	Able to identify one or none of the animals
<b>Animal Home</b>	Able to match all five animal homes to the correct animal	Able to match four out of five animal homes to the correct animal	Able to match three out of five animal homes to the correct animal	Able to match two out of five animal homes to the correct animal	Able to match one or none of the animal homes to the correct animal
<b>Animal Diet</b>	Able to match all five animal foods to the correct animal	Able to match four out of five animal foods to the correct animal	Able to match three out of five animal foods to the correct animal	Able to match two out of five animal foods to the correct animal	Able to match one or none of the animal foods to the correct animal
<b>Score</b> (total number of “X”s in the columns above)	_____/ 3	_____/ 3	_____/ 3	_____/ 3	_____/ 3
<b>Total Points</b>	5 points each X = _____	4 points each X = _____	3 points each X = _____	2 points each X = _____	1 point each X = _____

**Total Points for Matching Activity = \_\_\_\_\_**

### **3. Post-program Interviews**

The purpose of this interview was to gain specific information from a few randomly selected parents that participated in the family program. The interview helped provide information to the development and implementation staff about how effective and successful the program was. The interviews give the participants the opportunity to describe in their own words what they learned, what they enjoyed, and if attending the program increased the chance that they will attend future programs. The post-program interview in combination with the observation and alternative assessment will provide detailed information about information gained, attitude change, enjoyment levels, and other aspects that do into creating a successful program. The interview form and consent letter are included in Appendix P.

After the program was implemented a few randomly selected parents, possibly two or three, were asked to participate in this voluntary interview. The interview took place at the Central Wisconsin Environmental Station (CWES) immediately following the program. The interview was designed to take only fifteen to twenty minutes. While the parents are participating in the interview the children were taken care of by responsible CWES volunteers. The interviewer needed the interview form, pen or pencil, clipboard, and tape recorder.

### **4. Post-program Survey**

The third method of evaluation used was a post-program survey. The survey was sent out 30 days after the program to all of the parents who participated in the family program. The registration form asked the parents for their email address and the parents were asked again for this information as they arrived for the program. For the parents that had an email address the survey was sent to them electronically. For families that did not have, or did not wish to share

their email address they got the survey in the mail. About a week after the survey was sent, either through the mail, or through email, a reminder postcard was sent out. The parents were encouraged to send the survey back to CWES, either to the CWES email address, or through the mail in the self-addressed stamped envelope that they received with the survey.

This survey asked all of the participating families what they thought of the program overall, the specific activities and what they and their children gained from the program. There were six Likert-Scale questions that asked the parents what they and their children learned and what they enjoyed. Two of these questions also asked the parents about their actions since the program. For example, question two asked the parents if any discussions regarding what they learned from the program occurred following the program. The parents were also asked on this survey what they were willing to spend on attending a family program; this question was taken directly from the second survey that was sent to parents. This survey also asked the parents if they had any plans to attend other family environmental education programs at the CWES or at other facilities. These questions combined with the other three methods of evaluation were designed to create a complete picture of how successful the program development and implementation were. The entire post-program survey is included in Appendix Q.

### **5. Development of Evaluation Tools**

All of the evaluation methods were developed as the program was being developed, and were developed in connection with the program goals and objectives. All of the evaluation tools were reviewed by fellow graduate students and the graduate committee members to ensure the validity of the instruments. A validity panel was also used to ensure that the instruments would receive the appropriate responses from the participants. The letter that was sent out to the

validity panel and the instructions they were given are included in Appendix J and J1. The tools and consent forms were also reviewed by the Institutional Review Board. The development of the evaluation tools was based on guidance given and research done during the UW-SP class Natural Resources 610 Applied Program Evaluation sec 851 and independent research done examining current literature on program evaluation. The research that was done is presented and reviewed in the related literature review.

Table 9 – Thesis Timeline

---

<b>Task</b>	<b>Thesis Timeline Deadline</b>
Program of Study Approved	Dec. 21, 2005
Proposal Approved	Dec. 21, 2005
Focus Group Completed	Feb. 1, 2006
First Survey Sent	October, 2006
Reminder Survey Sent	November, 2006
Program Development	Dec. 2006 – Feb. 2007
Advertising for Program	Feb. 2007 – March 2007
Implementation of Program	March 17, 2007
Final Draft Written	April 1, 2007
Oral Examination	April 9, 2007
Graduation Ceremony	May 20, 2007

---

# CHAPTER FOUR

## Outline of Chapter Four – Results

### IV. Chapter Four – Results

- A. Introduction
- B. Objective One
  - 1. Kalamazoo Nature Center
  - 2. New Canaan Nature Center
  - 3. Schlitz Audubon Nature Center
  - 4. Museum of the Hudson Highlands
  - 5. The Gordon Bubolz Nature Center
  - 6. Bay Beach Wildlife Sanctuary
  - 7. Missouri Botanical Garden
  - 8. Shaw Nature Reserve
  - 9. Butterfly House
  - 10. Pocono Environmental Education Center (PEEC)
  - 11. Summary
- C. Objective Two
  - 1. Open-ended Survey to Parents
  - 2. Second Survey to Parents
- D. Objective Three
  - 1. Description of Program
  - 2. Advertising
  - 3. Registration Format
- E. Objective Four
- F. Objective Five
  - 1. Observation Evaluation
  - 2. Alternative Assessment
  - 3. Post-Program Interview
  - 4. Post-Program Survey

## IV. Results

### A. Introduction

The result of this research was an environmental education family program for the Central Wisconsin Environmental Station. This program was designed based on information gathered from what other centers around the country are currently doing, and directly from

parents in the central Wisconsin area. Data were collected to respond to the five objectives presented in this research; 1) The first objective was to identify and examine for content and effectiveness environmental education family programs used in selected centers throughout the country, 2) The second objective was to determine the features of family programs that parents in central Wisconsin would want to see offered at CWES, 3) The third objective was to develop a family program for CWES that reflects what parents asked for and adopts features of other successful programs, 4) The fourth objective was to implement the family program that was developed, and 5) The fifth objective was to evaluate the family program to determine if the development and implementation were successful.

## B. Objective One

*Objective one: The first objective was to identify and examine for content and effectiveness environmental education family programs used in selected centers throughout the country.* Ten different nature centers were found that had some kind of programming available for preschoolers, and/or preschoolers and their families. Basic descriptions of these nature centers and their preschool programs can be found in Table 10.

Table 10 – Nature Center Basic Descriptions

Center Name	Location	Description	Public/Private?	For families or children only?
Centers with Environmentally Themed Preschools				
Kalamazoo Nature Center	Kalamazoo, Michigan	Environmentally-centered preschool Nature's Way Preschool for 3-4	Public – pre-registration for school year required	Children attend by themselves

		year olds 36-week program		
Kalamazoo Nature Center	Kalamazoo, Michigan	“Kalamazoo Preschool Camp” for 3-4 year olds Nature themed summer day camps	Public	3 year olds – parents must attend 4 year olds – children only
New Canaan Nature Center	New Canaan, Connecticut	Environmentally centered preschool Beginner’s Nature Program for 3-5 years olds Runs Sept. - May	Private – must be members of the center and parents must apply and be accepted prior to the school year	Children only
New Canaan Nature Center	New Canaan, Connecticut	Discoverers Program for 3 year olds Nature themed summer day camps	Private – must be members of the center and parents must apply and be accepted prior to the school year	Children only
Schlitz Audubon Nature Center	Bayside, Wisconsin	Environmentally centered preschool for 3-5 year olds Runs for nine months during the school year	Private – must be members and parents must apply and be accepted	Children only
Schlitz Audubon Nature Center	Bayside, Wisconsin	Summer preschool day camps for 3-5 year olds	Public – members pay less per day	Children only
Museum of the Hudson Highlands	Cornwall, New York	Environmentally themed preschool Young Naturalist Program for 3-4 year olds Runs every month during school year	Private – must be members of museum and maintain membership	Children only
Centers with Preschool or Family Short Term Programs				
The Gordon Bubolz Nature Preserve	Appleton, Wisconsin	Summer preschool day camps	Public – members get discount	Families and children only
The Bay Beach Wildlife Sanctuary	Green Bay, Wi	Year-round environmentally themed day camps for “preschoolers”	Public – Green Bay residents get a discount on fees	Unknown
Missouri Botanical Garden	St. Louis, Missouri	Year-round environmentally themed day	Public – members receive discounts	Families



		programs “Garden Buds” series for 4-5 year olds and “Pitzman Nature Study Program” for 4-6 year olds		
Shaw Nature Reserve	Gray Summit, Missouri	Year-round environmentally themed day programs “Garden Buds” series for 4-5 year olds and “Where the Wild Things Are” program for 3-5 year olds	Public – members receive discounts	Families
Butterfly House	Chesterfield, Missouri	Year-round environmentally themed day programs for 2-4 year olds	Public – members receive discounts	Families
Centers with Weekend Family Camps				
Pocono Environmental Education Center		Weekend environmentally themed family programs for families with children of all ages	Public – members receive discounts	Families

The first four centers, Kalamazoo Nature Center, New Canaan Nature Center, Schlitz Audubon Nature Center and Museum of the Hudson Highlands, all have formal preschool programs that run throughout the school year. These centers were examined to determine the types of content and activities that were being done. The next five centers that are discussed, The Gordon Bubolz Nature Center, Bay Beach Wildlife Sanctuary, Missouri Botanical Garden, Shaw Nature Reserve, and The Butterfly House all have short-term preschool programs or preschool camps. These programs were examined for content, type of activities, length of time,

and cost. The last center that is discussed, Pocono Environmental Education Center, offers a family program where preschoolers can be attend, but programming is not directly designed for this age group. This center was looked at for overall format, and content.

### **1. Kalamazoo Nature Center**

The Kalamazoo Nature Center is located in Kalamazoo Michigan. The center runs a preschool specifically designed around environmental education. Nature's Way Preschool has a class for three year olds and a class for four year olds. The three year old preschool class meets two days a week, Tuesday and Thursday, for two hour sessions each day. The four year old preschool class meets three days a week for three hour sessions each day. Both classes have a maximum attendance; the three year old class has a maximum of 15 children, and the four year old class has a maximum of 18-20 children. The cost of the preschool is also different for the three year old class and the four year old class; \$177 per month for the three year old class, and \$267 per month for the four year old class. The preschool attempts to use a multidisciplinary curriculum to combine traditional readiness learning with preschool age-appropriate environmental education activities. Some of the activities that the preschool uses include nature study, guided play time, readiness activities to develop fine motor and gross motor skills, dramatic play, rhythm and movement, songs and finger plays, language arts, story time, outdoor exploration and nature walks.

The Kalamazoo Nature Center also has a program entitled, "Kalamazoo Preschool Camp". This program is also split between the three and four year old preschool children, with one camp for three year olds and one camp for four year olds. Both ages have a wide range of

themed camps. Themes, or titles, for the three year old campers include “Frogs in Motion”, “Bear Necessities”, “Neighborhood Birds”, “Peek in the Creek”, and “Meet the Mammals”. There are also three camps for the three year olds that are based on story books written by Eric Carle, “The Very Hungry Caterpillar”, “The Tiny Seed”, and “The Grouchy Ladybug” (www.naturecenter.org, 2006). The common activities that are done at each of the three year old camps include some kind of art project, and exploring nature walks. The three year old camps are offered for single day programs, for \$20 to \$25 per day, or week long programs for \$50 - \$75 for the week. The cost includes the programming for the camp, and a snack. For the three year old camp a parent or guardian must accompany the child while they are at camp.

The “Kalamazoo Preschool Camp” for four year olds also has themed camps such as “Nature at Night”, “Nature’s Way Story Book” which is based on children’s story books, and “Animal Planet” which gets the children investigating a lot of different mammals. The activities that are common between the camps for the four year olds are also an art project of some kind, and exploring nature walks. Unlike the three year old camp the four year old camps run for a week, there are not single day camps, and parents do not have to attend the camp with their children. The four year old camp costs \$100 per week of camp.

## **2. New Canaan Nature Center**

The New Canaan Nature Center is located in New Canaan Connecticut. This center has the Beginner’s Nature Program which is a nature focused preschool that has been in operation since 1967 (www.newcanaannature.org, 2006). The preschool runs during the school year, from September through May. The preschool attempts to take environmental education and integrate it into a preschool curriculum that also deals with the traditional educational, social, physical,

emotional, creative and cognitive needs that preschools are meant to address. The school emphasizes direct sensory experiences with the natural world, and bases the activities and themes of the preschool on the seasonal changes of the natural world around the school. The classes are half day in length running from either 9:00am – 12:00pm or from 12:30 – 3:30. The students that attend the preschool have to have their parents apply for and be accepted to the program.

The Beginner's Nature Program is broken down into three different sections, the three year old program, "Discoverers Program", the four and five year old program, "Explorers", and the three and four year old combined program, "Trail Blazers" ([www.newcanaannature.org](http://www.newcanaannature.org), 2006). The "Discoverers Program" has themes that reflect changes in the natural world and infuses that into activities dealing with art, music, movement, dramatic play and language activities. At this age level it is a two to three day a week program. The "Explorers Program" also reflects environmental changes that the children can witness happening with curriculum focusing on science, art, math, music, movement and dramatic play. At this age level the focus is on more active learning situations and the program is four or five days a week. The combined three and four year old program, "Trail Blazers", has a much broader, general focus on the environment. This program is a three day a week program. According to the New Canaan Nature Center website the goal of the integrated three and four year old program is "to increase the heterogeneity of the group to capitalize on the differences in the experience, knowledge and abilities of the children" (2006).

Along with the preschool programs that run during the school year the New Canaan Nature Center also runs several preschool summer camp programs. The Summer Camp Discoverers Program is for three year olds, and there are many different themed programs that

are offered throughout the summer. “Habitat Habitat” is one of the programs offered during the summer and has three hour sessions each day for two weeks. During this program the preschool children explore different habitats on the property of the nature center. Other summer camp programs include “Changes”, “Einstein Camp!”, “Slimy, Scaly, Spineless”, “Young at Heart”, and “Safari Adventure”. Each camp has a different theme and different activities. The time frame for all the camps is about the same, three hour sessions each day for one to two weeks.

The New Canaan Nature Center also offers some family environmental education programs, as well as some “Mommy and Me” programs. Most of these programs have age limits of at least six years old. This center holds Earth Day programs for all ages, and a hike program for families with children five years and older. In order to attend any of the programs at the New Canaan Nature Center, including the preschool programs, the participants must be members of the center.

### **3. Schlitz Audubon Nature Center**

Located in Bayside Wisconsin, a suburb of Milwaukee, the Schlitz Audubon Nature Center has a nature focused preschool for children ages three to five. The facility is small and selective, requiring the children to apply for the program and be accepted before they can attend. This helps to maintain their small class size; only 16 children with two teachers. The preschool runs for nine months each year, and the classes are two hours and 45 minutes each. The children can attend either the two, three or four day programs each costing something different. The two day per week program is \$1,725 per year, the three day per week program is \$2,425 per year, and the four day per week program is \$3,000 per year. The classes mix the children of different ages together, and are based on seasonal changes in the natural world that surrounds the facility. The

activities that the students participate in are in the areas of art, music, perceptual and cognitive skill development, natural science exploration, and daily outdoor discovery. The content of the preschool classes are strongly connected to environmental education and active learning using the natural world to connect different subject areas. According to the center's website, the "goal is to develop your child's ability to work independently and cooperatively, and to act in a caring and responsible way towards their environment, themselves and others" (www.schlitzauduboncenter.com, 2006).

The Schlitz Audubon Nature Center also offers summer camp programs for preschool aged children. There are five different summer camp programs, "Nature's Nuts: Birds of a Feather", "Nature's Nuts: Animal Homes", "Nature's Nuts: Nature's Rainbow", "Nature's Nuts: Who lives in a pond?", and "Nature's Nuts: Exploring Lake Michigan". Each camp is two hours long and has a wide variety of activities. The possible activities include nature arts and crafts, stories, songs, games, outdoor adventures and exploration, hikes, and animal observation and identification. The summer camp programs are offered to members and non-members of the nature center, but the cost is different for non-members. Members will pay \$100 for a summer camp program, while non-members will pay \$120 for the same summer camp program.

#### **4. Museum of the Hudson Highlands**

Museum of the Hudson Highlands is located in Cornwall, New York. This school year preschool, Young Naturalist Program, has thematic units that it follows such as recycling, plants, water, animals, dinosaurs, the body, day and night, and rocks. Each day the students participate in a wide range of activities; free play, craft table, circle time, outdoor exploration, snack time and science circle. The center's website, [www.museumhudsonhighlands.org](http://www.museumhudsonhighlands.org), listed examples of

specific activities that they students might be involved with such as “hiking to the forest, planting seeds, creating things from recyclables, drawing from nature, playing with puzzles, observing insects, identifying birds by sight and sound, collecting, charting, counting, participating in field trips, searching for tadpoles, or finding animal tracks” (2006). There are two different preschool classes, one for three year olds and one for four year olds. The three year old class, called “The Turtles and Frogs”, meets two days a week for two hours and 45 minutes. The four year old class, called “The Owls and Deer”, meets three times a week for two hours and 45 minutes. The families of the children must be members of the museum in order to apply for the program. The cost for the two classes is also different with the three year old class costing \$125 per month, and the four year old class costing \$175 per month. Both the three and four year old classes are kept very small with a student to teacher ratio getting no higher than eight to one.

### **5. The Gordon Bubolz Nature Preserve**

The Gordon Bubolz Nature Preserve, located in Appleton Wisconsin, offers one hour preschool programs throughout the summer. These programs are all based on different children’s books and will begin by reading the children’s book and then doing activities and crafts that deal with the topic of the book. Some of the camps that have been held in the past include “The Grouchy Lady Bug”, “The Very Busy Spider”, “The Very Quiet Cricket”, “Inch by Inch”, “The Very Hungry Caterpillar”, and “Swimmy” ([www.bubolzpreserve.org](http://www.bubolzpreserve.org), 2006). These programs are offered for children between the ages of three and five. Like many other centers, a discount is offered to participants that are members of the facility, with the program only costing members \$3, and non-members \$5.

## **6. Bay Beach Wildlife Sanctuary**

The Bay Beach Wildlife Sanctuary has been running its “Animal Stories for Preschoolers” program for over 15 years in Green Bay, Wisconsin. The age of the children that attend these programs is not specific, the website simply states that the programs are meant for “preschool aged” children ([www.baybeachwildlife.com](http://www.baybeachwildlife.com), 2006). The same program is offered twice a month at the center, the first Monday of the month and the third Monday of the month. For residents of Green Bay the cost for the program is \$2 and for non-residents the cost is \$3 for the program, and pre-registration is required to attend. Formal learning objectives are not set for each program that is developed, the center overall strives to introduce children to wildlife and the natural world. Formal evaluation of student’s knowledge gain or enjoyment of the program is not done either. At most the staff will lead a question and answer section at the end of the program to try and gauge what the students may have learned.

## **7. Missouri Botanical Garden**

The Missouri Botanical Garden offers a wide range of preschool classes through the “Garden Buds” program ([www.mobot.org](http://www.mobot.org), 2006). This facility is located in an urban setting, within the city limits of St. Louis, Missouri. The “Garden Buds” program is offered to four and five year old children who can attend single classes or can sign up for a whole series of programs. The seven week series, with one 90 minute session each week, costs \$90 for members of the Garden, and \$104 for non-members. Individual classes cost \$14 for members and \$16 for non-members. The same class is offered twice a week, once on Thursday and once on Sunday each week. The main focus of all of the classes within the series is to introduce the young



children to different areas of the Garden and do hands-on activities. Each class includes indoor hands-on activities, a walk, a story and a snack.

In Fall 2006 the seven week series included “Fantastic Fruit”, “Bamboo, You and Goldfish Too!”, “The Pumpkin Patch”, “A Cool Cave”, “Under the Garden”, “A Garden in a House”, and “Cookie Cooks”. “Fantastic Fruit” was a class where the students use their senses to discover different fruits. The class included making fruit art, visiting the fruit gardens, and enjoying a fruit snack. “Bamboo, You and Goldfish Too!” introduced the children to the Japanese Garden where they got to try painting Sumi style, learn a few Japanese words, and try some new foods. Around Halloween “The Pumpkin Patch” program got the children examining pumpkins, squash, and gourds of all sizes. The children got the opportunity to make a pumpkin craft and eat something made out of pumpkins. “A Cool Cave” was a program where the children got to learn about life in a cave. The children learned about fossils, critters that might live in caves, and were given a cave plant to take home. The “Under the Garden” class focused on the tiny things that live in the soil, and exposed the children to some science equipment such as magnifying glasses and microscopes. Learning about and building their own greenhouse was the focus on the “Garden in a House” class. The children got the chance to visit the oldest greenhouse at the Garden, and built a greenhouse of their own to take home. The final class in the series, “Cookie Cooks”, taught the children which plants are used in the making of cookies and the children were able to bake some cookie to take home. The titles and content of the classes changes each season, and each year ([www.mobot.org](http://www.mobot.org), 2006).

The Missouri Botanical Garden also has the Pitzman Nature Study Program that is offered to four to six year olds. This is a ten class series where children can attend the entire

series or single classes. The entire ten class series costs \$135 for members of the Garden, and \$150 for non-members. Attending individual classes costs \$16 for members and \$18 for non-members, per class that they attend. The classes are an hour and a half long, and the same class is offered twice a week. The class titles and content change each season, but overall the program tries to introduce the children to different areas of the Garden. The topics covered by the classes may include vegetables, learning how plants protect themselves, how plants attract birds, insects that live in different gardens, and what those insects do to help gardens, and many other topics.

### **8. Shaw Nature Reserve**

Although Shaw Nature Reserve is a division of the Missouri Botanical Garden, it is located in a very rural part of the state, Gray Summit, Missouri. As part of the Garden, Shaw Nature Reserve also has a “Garden Buds” program series. However, the ages are for the Reserve programs are three to five, instead of the four to five that they are at the Garden. The general concept is the same for the classes at the Reserve as they are at the Garden. Children will be introduced to different parts of the natural world by using their senses, hands-on activities, hikes or walks, and crafts. Children can attend the entire three class series for \$45 for members or \$50 for non-members, or just attend individual classes for \$16 for members and \$18 for non-members. Each class is a two and a half hour session.

The Fall 2006 “Garden Buds” series at the Reserve included “Exploring by Using your Senses” where children would get to explore several different habitats and do activities to use their senses in new and exciting ways. “Miss Spider’s Tea Party” is another class in the series. This class revolves around a children’s book about a unique spider, and then the children will learn more about spiders and insects in the wild. The third class in the series, “Batty for Bats”, would

introduce the children to the world of bats, and how important they are. The Shaw Nature Reserve sets learning objectives that they hope to accomplish for each of their programs in the “Garden Buds” series. For example, for the spider class a sample objective might be for the students to be able to tell the different body parts of a spider, or to be able to tell the difference between a spider and an insect. For this objective they would measure this by using an alternative assessment method of creating a spider out of cookies and candies (www.shawnature.org, 2006). The instructors can observe how well the children can assemble and identify the body parts of the spider. Most of the objectives are vague and for each program there are only two to three objectives specified. The Reserve chooses to use children’s books in their programs because they can use the book as a part of the advertisement for the program, and some parents may recognize the book and want to attend the program (www.shawreserve.org, 2006). Also, they can make the book available for purchase to the parents, and this will help continue to build the child’s interest and education on the topic at home.

Shaw Nature Reserve also has a program entitled “Where the Wild Things Are” that is for three to five year olds. This is a program for children and their parents to participate in together. This program runs several times each season, two hours each session. The cost for the program is \$14 for members, and \$18 for non-members. During this class the group will be taking a long exploratory hike through the many different habitats of the Reserve.

## **9. Butterfly House**

A third division of the Missouri Botanical Garden, the Butterfly House is located in Chesterfield, Missouri within Faust Park. The mission of the Butterfly House is to “foster a better understanding and increased awareness of our natural world” and has been working

toward this mission since it was founded in 1995 ([www.butterflyhouse.org](http://www.butterflyhouse.org), 2006). As part of their way to accomplish this mission classes are offered for all ages of children and families at the Butterfly House. “Camp Bug-a-loo” is a program for two to four year old children and their parents. \$12 for members, and \$18 for non-members, is the cost to attend one of these classes. This class is an hour and half, offered throughout the year, and introduces the children to flowers and insects. Games, hands-on activities, and a walk through the butterfly garden are used to get the children excited about the topic.

The other programs that the Butterfly House offers for preschoolers are only offered through a home-schooling program that is run there. The home-schooling program has sessions for three to five year olds and their parents. Each program costs \$3 for the child and \$4.50 for adults. The three programs offered for home-schoolers in 2006 were “Story of a Butterfly”, “Ant Homes Under the Ground”, “Buzz a Hive”, and “Critters”(www.butterflyhouse.org, 2006). Each of the classes will give the children and their parents a chance to explore the butterfly garden, and learn about something different that is helping it to succeed. The classes also include crafts, stories and other hands-on activities.

#### **10. Pocono Environmental Education Center (PEEC)**

The Pocono Environmental Education Center is located in Dingmans Ferry Pennsylvania within the Delaware Water Gap National Recreation Area. This environmental education center “enhances environmental awareness, knowledge and appreciation through hands-on experience in a natural outdoor classroom” ([www.peec.org](http://www.peec.org), 2006). The Pocono Environmental Education Center runs “Family Nature Programs” during the weekends throughout the year. The weekend programs are themed around seasonal changes that are occurring at the site, and have

educational, social and recreational activities. These activities might be nature study based, nature art activities, outdoor recreation, and evening presentations. The family programs bring in all age levels of participants from adults to preschoolers, and the participants have options of activities that they can attend throughout the weekend based on their age and interests. No learning objectives are set for these activities but some kind of evaluation is done of the programs by the staff to get feedback from the participants. The cost for the family program is \$134 - \$175 dependent on theme and member status. This cost includes lodging, meals, snack and all programming.

### **11. Summary**

There are trends that appear within the different centers with regards to content, activities and cost for programs. Content is an area where similarities can be seen. Animals and insects are two of the most commonly seen content areas. Most programs dealing with one of these two content areas focus on a single animal, such as bears, or a single insect such as caterpillars. Even programs that are not focused on either mammals or insects still maintain a very narrow focus centering on concrete concepts.

The use of storybooks is another trend that can be seen within the centers. Five out of the ten nature centers used storybooks in the preschool programs either as a major theme of the program or as one of the activities within the program. Karen Bryan at the Shaw Nature Reserve uses storybooks with programs that she develops and believes that it allows for better advertising because parents may have heard of the book before so that may get their attention. Bryan also feels that the storybooks are a great way to get children excited about a topic in a way that is age appropriate.

Besides storybooks many other types of activities are used within preschool programs. This wide range of activities is another trend that can be seen with the nature centers. A program that only runs for a few hours will have the preschoolers doing a wide range of different types of activities focusing very much on a multidisciplinary approach. These activities can include anything from nature hikes, habitat explorations, arts/crafts, story time, games, songs, and many other hands-on activities. Four out of ten of the centers use a multidisciplinary approach to reach the entire audience of preschoolers. Two of the school year nature centered preschool programs even use this idea as a marketing tool, advertising their use of the multidisciplinary approach.

Requiring memberships or discounts for members is another trend that has revealed itself. Most centers either require participants to be members of the facility in order to attend the program or give a discount of some sort to people that are members that are attending the program. Three out of the ten centers require participants to be members in good standing with the center in order to attend the program. Six out of the ten facilities give discounts to their members and one center provides a discount to residents of the city where the center is located.

## **C. Objective Two**

*Objective two: The second objective was to determine the features of family programs that parents in central Wisconsin would want to see offered at CWES.* These data were gathered through two separate surveys. An open-ended short survey and an in-depth survey sent out to parents in the central Wisconsin area.

## **1. Open-ended Survey to Parents**

In May 2006 the open-ended survey to parents was sent out. Surveys were given to Lorrie Richardson at the Geselle Institute for the four and five year old class parents. Fourteen surveys were given out at the Geselle Institute and another eighteen surveys were given out to parents that had their preschool aged children enrolled at the University of Wisconsin Campus Day Care. The total of surveys that were sent out was 32, and thirteen surveys came back from the parents. The return rate for this survey was 41%. Because the survey was open-ended and the parents could include as much information as they want the totals for each question do not reflect the total number of surveys that were returned, but rather how many times certain items were mentioned by parents. The entire compiled results from this survey are included in Appendix G.

Question one of the survey asked the parents “What does your preschool aged child/children enjoy doing outside?” There was a very wide range of responses to this question, but a few responses were seen quite a few times. The activity that got the most responses was hikes, walks, or walks in the woods, with eight parents indicating that this was one activity their child enjoyed. Biking was the second most mentioned response. Table 11 below shows all of the responses and how many parents mentioned each activity.

Table 11 – What Parents Say Their Preschool Aged Children like to do outside

Activity Mentioned	# of times mentioned
walks/hikes/walks in the woods	8
biking	7
playgrounds/swinging	6
playing in the sand	6
catching insects	5
sports (summer)	5
looking for animals	4
water activities	3
digging	3
planting flowers	3
swimming	3
feed ducks	2
looking at flowers	2
exploring	2
gathering/collecting sticks & rocks	2
sports (winter)	1
climb trees	1
spraying water	1
running	1
having picnics	1
playing games	1
drawing with chalk	1
climbing	1

Table 12 – Last Activity Parents Participated in with Their Child

Activity Mentioned	# of times mentioned
walk/hike	4
looking for animal tracks	3
Biking	3
playground	2
working in the yard	2
Sports	2
snowshoeing	1
spotting spring changes	1
looking for birds	1
throwing rocks into water	1
Picnic	1
crayfish hunting	1
picking up litter in the neighborhood	1
played in the sandbox	1
digging	1
playing with water/watching it run	1
Tag	1

Question two on the open-ended survey to parents asked them “Think back to the last time you spent time outside with your child. Describe that experience and what you and your child did”. Just like with the first question there was a wide range of responses. The activity that was mentioned the most was walks or hikes, with four parents mentioning this. Two activities had three parents mention them in this question, biking and looking for animal tracks. Playing at a playground, working in the yard or sports were all mentioned by two parents in response to this

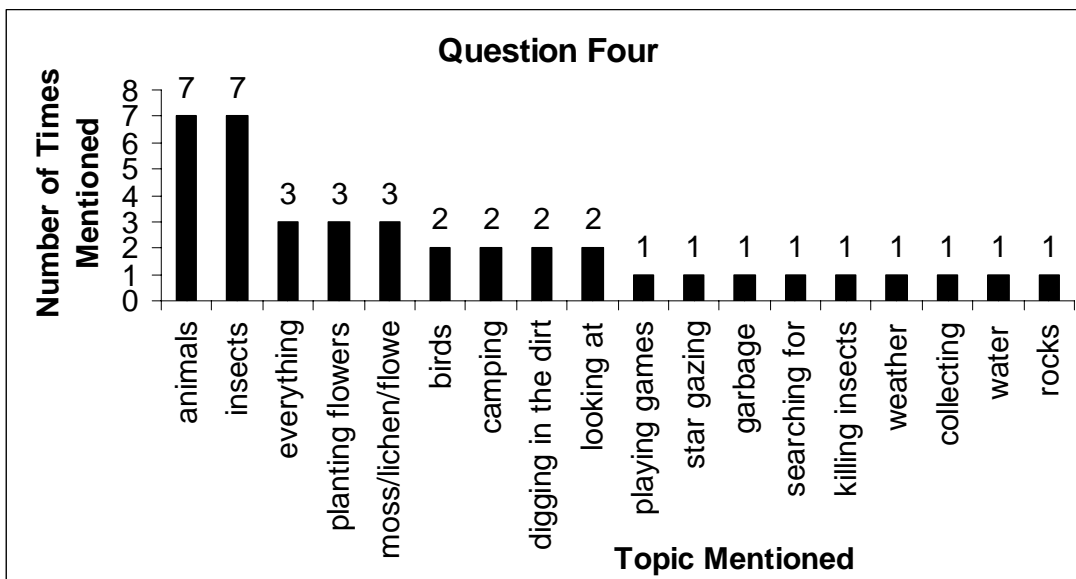


question. A wide range of other activities were mentioned by only one parent. For the complete list of activities mentioned in response to question two see Table 12.

The third question on the survey “Were there other children involved with this experience, either related, or not related?” provided only two responses. The question was asking specifically about the experience that the parent had described in question two. The majority of the parents, 12 out of 13, indicated that the only other children that participated in the activity with their children were siblings. One parent indicated that no other children were participating in the activity with their child.

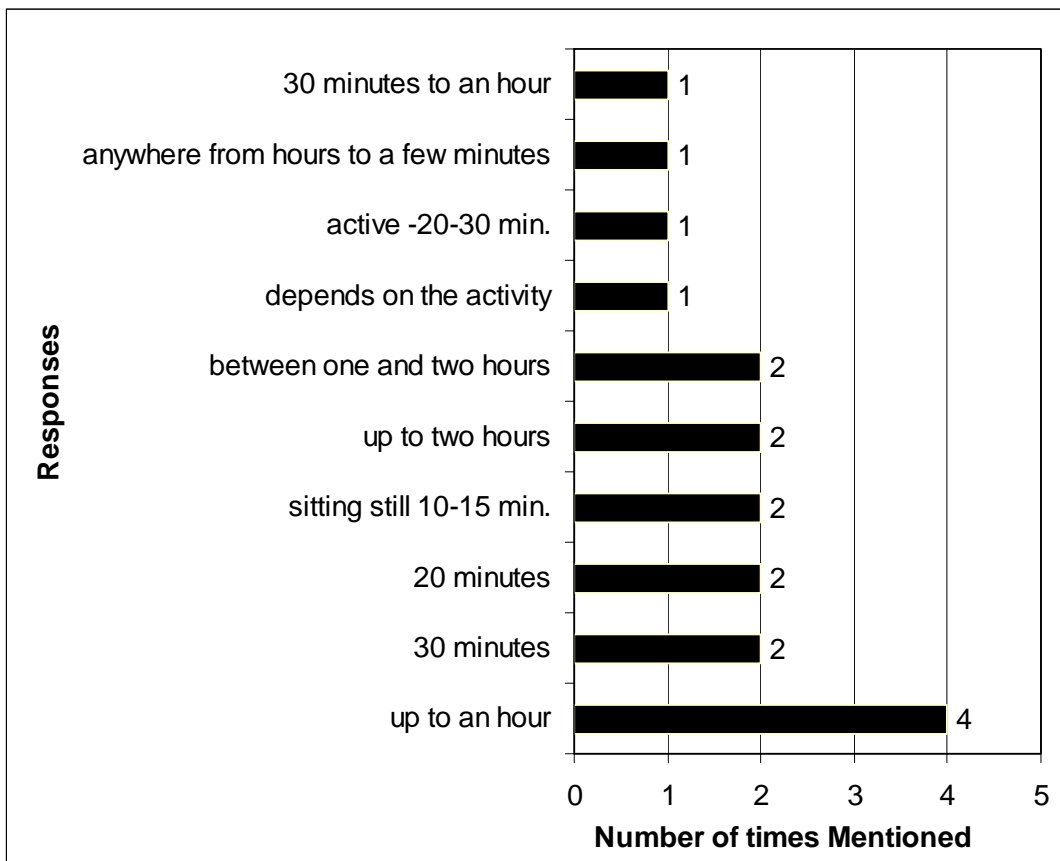
Question four was “What outdoor concepts, or objects, such as insects, animals, plants, the soil, etc. do you find your child to be most interested in?”. The two topics that were mentioned the most by parents, each mentioned seven times, were animals, and insects. Three topics were mentioned by three parents each, everything, planting flowers, and moss/lichens/flowers/plants, as being topics that their children are most interested in. For the whole list of activities mentioned and how many times, see Figure 1.

Figure 1 – Topics that Parents feel Their Children are Most Interested In



Question five asked the parents about the length of time they felt that this topic of activity could hold their child’s attention. Four parents indicated that up to an hour was the amount of time that they felt their child’s attention could be held by a topic of interest. Five different responses were written by two parents each; 30 minutes, 20 minutes, sitting still 10-15 minutes, up to two hours, and between one and two hours. The remaining four responses were only suggested by one parent each; depends on the activity, active – 20-30 minutes, anywhere from hours to a few minutes, and 30 minutes to an hour. To see the whole list of responses and the percentage of parents that indicated each response see Figure 2.

Figure 2 – Length of Time Parents Feel an Activity can Hold their Child’s Attention



Question six asked the parents to indicate what resources they were seeking out to help encourage their child’s interest in the activity that they described in question two. An overwhelming majority of the parents, 10 out of 13, listed books as their main resource. The second most mentioned resource, by 4 parents, was Schmeeckle Reserve (an urban nature center and preserve operated by UW-SP). Four other resources were noted by two parents each; internet, Children’s Museum, professionals, and the children watching their own parents. The rest of the resources were only mentioned by one parent. The complete list of responses and is shown in Table 13.

Table 13 – Resources Parents are Using

<b>Resources Mentioned</b>	<b># of times mentioned</b>
library/books	10
Schmeeckle	4
professionals	2
Children's Museum	2
Internet	2
watching parents	2
Friends	1
Wildlife Rehab Center in Bay Beach	1
“Kid Conservation Day”	1
winter candlelight walk	1
Hunting shows	1
nature day camps @ University of Wisc-Madison Arboretum	1
county parks	1
teaching materials	1
Jordan Park Nature Center	1
YMCA	1

Table 14 - What Parents Want their Children to do at a Family Program

<b>Ideas Mentioned</b>	<b>#of times mentioned</b>
hands-on activities	6
insects (how they grow, what they eat, what eats them)	2
nature walks	2
supervised by professionals	1
earth worms	1
Stories	1
something to bring home	1
exploration of different habitats	1
nature based craft projects	1
Coloring	1
rocks/minerals	1
Ponds	1
respect for the environment	1
what pollution is and how we can help	1
gardening (plant something, tend to it, and reap the benefits)	1
play games	1
look at objects under a microscope	1
learn how things are connected, why they are important, and what they do	1

The seventh question on the survey asked the parents about family environmental education programs, and what they would want their child to do at a family program that was based on the topic of interest that they mentioned in previous questions. This list of activities was a very wide range of responses, with most parents having their own individual idea about what the family program should entail. The only response that was mentioned by more than two parents was that the program should contain hands-on activities, which was indicated by six parents. Two other ideas, insects (how they grow, what they eat, what eats them) and nature

walks, were mentioned by two parents each. The entire list of ideas from this question is presented in Table 14.

Question eight, “How do you feel a family environmental educational program designed for your preschool child would benefit you as a parent?” produced an broad set of responses. Although most responses were only mentioned once, four different concepts were mentioned by two parents. Providing a way for parents and children to share interests, helping to enhance what a parent is trying to teach to their child, making the parent and child more mindful of the environment, and as a great resource for parents were the four responses that two parents wrote down. Other ideas, such as getting over phobias, teaching compassion, meeting other moms, and that the parents could learn from their children, were all ideas that got mentioned by one parent in response to this question. The complete list of ideas gathered from question eight are presented in Table 15.

Table 15 – How Parents felt a Family Program Would Benefit Them

<b>Ideas Described by Parents</b>	<b># of times mentioned</b>
share interests	2
help enhance what parent is trying to teach	2
more mindful of the environment	2
great resource as a parent	2
teach compassion	1
Getting over phobias	1
family based experience	1
meet other moms	1
learn child's interests	1
the younger they learn the better	1
bring parent closer to the child	1
child's interests broaden	1
Parent could learn from child	1
learning would be at child's level, not that of adults	1

The last question on the survey, the ninth question, asked the parents if they had anything else they would like to say, or add that might help in the development of a family environmental education program. Seven parents responded to this question. The responses, quoted directly from the surveys, are listed below.

- I think a program like that would be great, and I would be very interested in it.
- We would really enjoy something like that.
- How thrilling to teach children about the environment. We had a babysitter who is now a teacher in the field; the children loved her.
- If we teach kids about it early on they will care about our Earth forever (recycling, etc.)
- It would be nice to even have some classes like snowshoeing w/kids & perhaps info on how to do outdoors winter activities w/ young children. Nature history of WI - who walked & lived here before we were here. Thank you for considering this topic.
- I think it's worthwhile - I've been a chaperone on a field trip to Boston School Forest in Stevens Point school district. I thought it was very worthwhile.
- Only that the need is there for it, but unfortunately environmental issues are usually at the bottom of the totem pole as far as budgets and spending go. But it's important that we show our children how important the environment is, because the world is vastly different than the one we grew up in and will be when they get bigger.

## **2. Second Survey to Parents**

A total of 157 surveys were sent out in the fall of 2006 to five different preschools around central Wisconsin. Out of the total, 68 surveys were returned with a return rate of 43%. Some of the questions were not responded to by all of the parents, and other questions the parents were able to mark as many options as they wanted, so in most cases the total responses to a question may not reflect the total number of surveys returned. The entire compiled results from the survey are included in Appendix H.

The first section of the survey, the demographics section of questions, helps to explain the population of parents that returned the survey. The entire list of demographic information can be seen in Table 10. The general picture of the respondents is that they are female, with only 10 surveys coming back from males out of the total 68. The respondents were also about 33 years old, from a rural town, with two children that attend a public school, have never been to the CWES before, and have not been to an environmental education program before. However, looking at each question and the percentage of the responses can present a clearer picture of all of the participants.

Out of the 68 that responded to the survey, 20 people responded that they live in a rural area, 18 indicated that they lived in a town with less than 9,000 people and nine of the respondents lived in an unincorporated town or village. These three categories got the most responses, with the other options getting only a few each. Only three lived in a town with a population between 10,000-19,000. Three was also the response number for a town with over 50,000 people. Six of the respondents indicated they lived in a town with a population of 20,000-29,000 and five said their population was between 30,000-39,000. The 40,000-49,000 got no responses from the parents.

The next demographic question asked the parents about the number of children that they had. Thirty-nine of the parents indicated that they had two children, 14 parents responded that they had three children, and 10 parents responded that they had one child. The other two categories were four children and more than four children, three parents indicated that they had three children, and two parents marked that they had more than four children.

The parents were then asked to list the ages of their children. This information is listed in its entirety in Table 16. The most noteworthy totals are not actually the two ages with the highest number of responses. Four years old and five years old are the two ages with the most responses, however this is a given because these are all parents of preschool aged children. The numbers of note are the ages besides the preschoolers that were most highly indicated. The reason these ages would be of importance is because if a family program is being designed for preschoolers knowing the mostly likely ages of their siblings could help with the planning of the program. The highest noted ages after the four and five year olds were two years old with twelve parents having a child of this age, three years old with eleven parents listing this age, and lastly seven years old with twelve parents listing this age.

The respondents were then asked to indicate their age. This was an open ended question allowing the parents to write their exact age. Ranges were established from the answers that were given. The average age was about 33 years, 29 of the people that took the survey were between the ages of 31 and 35. In both ranges of 26 to 30 and 36 to 40 there were 13 people that marked they were this age.

As part of the demographic section of the survey the parents were asked about their past exposure to environmental education; if they had ever been to the CWES before, or if they had ever attended any kind of environmental education program before. In response to whether they had ever been to the CWES before, 15 people stated that they had been there before and 53 stated no they had not. Six out of the 15 that responded yes went further and explained that they had been to the CWES with some kind of school program. When asked if they had ever attended any kind of environmental education program 19 stated that they had, and 49 stated they had not.



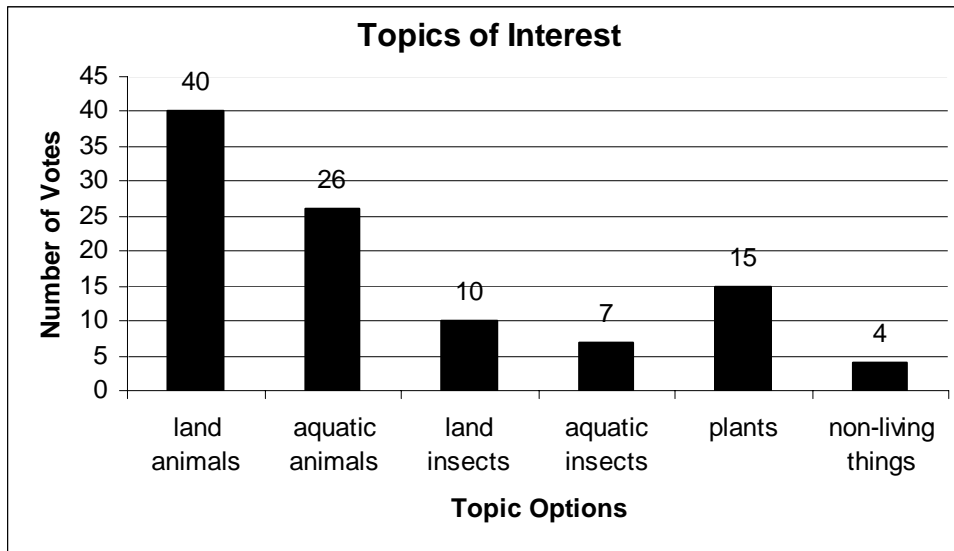
Table 16 – Respondent Demographics

<b>Demographics of Respondents</b>		
<b>Gender</b>	Male	10
	Female	55
	Unknown	3
<b>Size of Town</b>	Over 50,000	3
	40,000 - 49,000	0
	30,000 - 39,000	5
	20,000 - 29,000	6
	10,000 - 19,000	3
	Under 9,000	18
	Unincorporated town or village	9
	Rural area	20
<b>Number of Children</b>	One child	10
	Two children	39
	Three children	14
	Four children	3
	More than four children	2
<b>Child age frequencies (years)</b>	Unborn	2
	6 months	7
	1	6
	1.5	6
	2	12
	2.5	3
	3	11
	3.5	4
	4	27
	4.5	2
	5	29
	6	9
	6.5	1
	7	11
	8	4
	9	5
	10	5
	11	3
	14	2
	21	1
<b>Type of school children attend</b>	Public	52
	Private, non-church affiliated	10

	Parochial	4
	Home schooled	0
<b>Age of Parent (years)</b>	20 and under	0
	21-25	4
	26-30	13
	31-35	29
	36-40	13
	41-45	5
	46-50	1
<b>Attended CWES before</b>	Yes	15
	No	53
<b>Attended any EE program before</b>	Yes	19
	No	49

The next section of the survey asked the parents questions about what kind of content or topic they felt their children would be most interested and thus would be interested in seeing a family program developed around. When asked to chose between water or forest as the general overall topic there were 49 votes for the forest theme and 27 votes for the water theme, with some people choosing both. The following question asked the parents about more specific topics, asking them to vote on which topics they felt their children would be most intested in. Land animals was the topic that received the most votes from the parents; 40 parents marked it as a topic of interest. Aquatic animals was the next topic that got the most votes with 26. All of the options and how many votes each got are included in Figure 3 below. From these two questions it can be inferred that parents feel their children would be most interested in a program that would involve land animals that live in or near forests.

Figure 3 – Topics that Parents Felt their Children would be Most Interested In



The third section of the survey asked the parents about activities that would take place during the program. The first question in this section asked for the format that the parents wanted the activities to be in. The options for this question included option one “a program for just you and your preschool aged child where you participate in the activities together”, option two “a program for just for you and your preschool aged child where there are separate educational programming for adults, and the children”, option three “a program for your whole family where you participate in the same activities together throughout the entire program”, option four “a program for your whole family where your children participate in separate age appropriate activities the whole time”, and option five “a program for your whole family where your children participate in separate age appropriate activities for part of the time, and joint activities some of the time”. The parents were asked to rank the options as to which they were most interested in; a ranking of one indicated that they were most interested in that option, a ranking of 5 meant they were least interested in that option, 2-4 were levels between most and

least. Mode and median can be used to describe the data that was collected from this question. Option three had a mode of one and a median of one, meaning that this option had a very high level of interest for most of the parents. Option one and option five had a mode of one and a median of two which means that these two options also have a high interest level with the parents as well, although not as high as option three. The option with the least interest level from the parents is option two with both mode and median being a five. Modes and medians are listed in Table 17 below for all five of the options in this question.

Table 17 – Interest Level of Parents in Different Activity Format Options

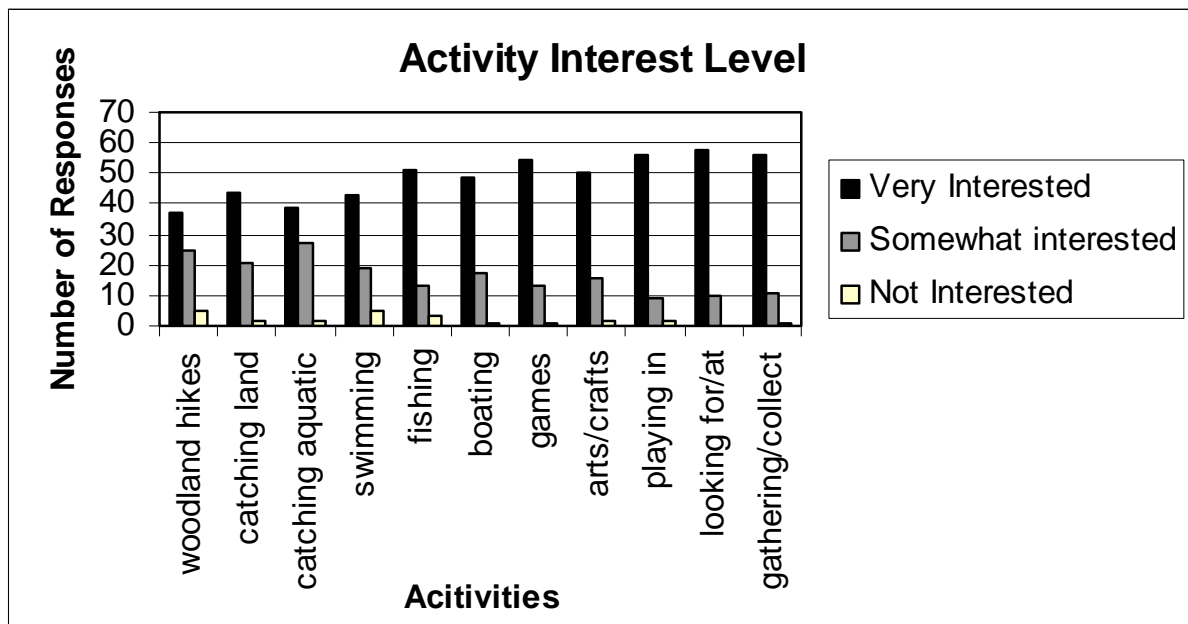
(1- most interested, 5- least interested)

<b>Activity Format Option</b>	<b>Mode</b>	<b>Median</b>
Option One – preschool child and parents participate in activities together	1	2
Option Two – preschool child and parents participate in separate activities	5	5
Option Three – whole family participates in activities together	1	1
Option Four – whole family participates in separate activities	4	3
Option Five – whole family participates in some separate activities and some joint activities	1	2

The activity format section goes on to list eleven different activities that are frequently done in environmental education programs, and are activities that parents stated their children enjoyed from the first survey that was conducted. The parents were asked to rank these eleven different activities as 2 – most interested, 1 – somewhat interested, or 0- not interested based on what they believed their children would enjoy. From this question the data shows that parents believe their children would be most interested in “looking for/at animals”, with this activity

option having 58 out of the total 68 that responded ranking this activity as a 2. With 56 parents ranking them with a 2, “gathering/collecting things” and “playing in soil/sand”, were both close behind the top activity. “Games” was another activity that parents felt would be of interest to their child, and 54 parents ranked this activity as a 2. On the other end of the scale, “woodland hikes” got 37 most interested votes, and “catching aquatic insects” got 39 most interested votes. “Catching aquatic insects” also got 27 least interested votes. Figure 4 shows how many parents out of the total 68 ranked each of the activities as most interested and least interested.

Figure 4 – Interest Level Parents Feel Their Children would have in Different Activities



The third question in the activity related section asks the parents about whether they would like to participate in a structured program with time frames for each activity, or if the parents would prefer activity stations. The activity stations option would mean that the parents could choose which activities to participate in and for how long, but there would be limited guidance and instruction by a teacher. The structured time frame option means that the parents

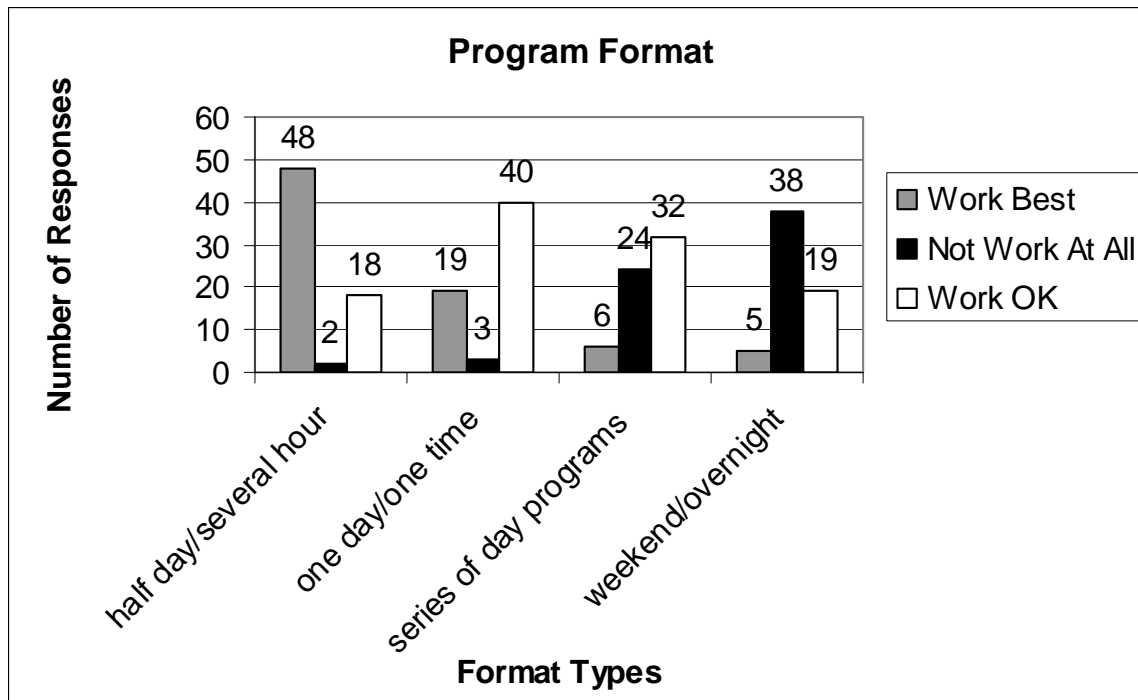
would all participate in the same activity together with their children, with each activity ending and beginning at a certain time, but all of the activities would be lead by an instructor. Out of the total 68 participants in the survey 41 said that they would be more interested in a program designed with activity stations, and 27 said the structured time frame would be a better fit for them.

The last question in the activity related section deals with the amount of interaction parents would like to have with other families during the program. The question gives the parents two choices, participate in activities just with their own family, or be mixed with other families while they participate in the activities. The majority of the parents chose to be mixed with other families; 49 parents voted for mixing with other families, 17 wanted to just be with their family, and two did not respond to the question.

The next section in the survey was the time frame related section. This section asks about time of year, time of day, and length of time for activities. The first question gives the parents different options for the program format dealing with different time frames. The four options they were given were, “a half-day/several hour family program”, “a one day, one time family program”, “a series of day programs built on the same topic”, or “a weekend/overnight family program. The parents were asked to rank the different options as to which one of the options would work best (2), work OK (1), and not work well (0). The first option, of a half-day/several hour family program, had 48 parents indicate that this option would work best for them. The second option had 19 parents indicate that this option would work best, 40 indicating it would work ok, and 3 indicating this option would not work well. The option with the most parents stating it would not work well was the last option, the weekend program. This option

had 38 respondents choose the not work well option, 19 choose the work ok option and 5 choose the work best option. All of the results from this question are presented in the graph in Figure 5.

Figure 5 – How Parents Ranked Different Program Formats



To determine how long each individual activity should be the parents were asked how long they felt their child could be entertained or enjoy doing one activity. This was an open-ended question so the responses that came back varied greatly. All of the responses and how many parents wrote each one are listed in Table 18. The responses ranged from 30 seconds to three or four hours. Eight parents indicated that the length of time their child could enjoy one activity “depends”. Some parents explained that the length of time depended on how active the activity was, and how interested their child was in the particular activity, and some parents did not expand on their response of “depends”. The response that was written most often was 20-30 minutes, with 17 parents indicating this. Eight different responses were written only once, and

some of these could fall party into other categories, but the time frames were unique in such a way that they required being set apart on their own.

Table 18 – How Long Parents Feel their Child Can Enjoy One Activity

<b>Responses</b>	<b># of times mentioned</b>
20-30 minutes	17
1-2 hours	14
Depends	8
30-45 min	6
Less than 20 minutes	4
30 minutes - 1 hour	3
over 2 hours	3
45-90 min	1
20-45 min	1
30 sec	1
"quite well"	1
half day	1
10-30 min	1
not sure	1
15 min - 1hr	1

Table 19 – Time of Year Parents Feel is Best for a Family Program

<b>Month Options</b>	<b># of times marked</b>
January	23
February	29
March	29
April	27
May	31
June	42
July	35
August	35
September	23
October	22
November	15
December	8

After responding to the time frame for individual activities the parents were then asked to look at a list of the all of the months of the year and mark each month that it would be most convenient for them to attend a family environmental education program. The parents could mark as many or as few months as they wanted, and most parents did respond to this question. The most any month could have would be 68 votes because that is how many people responded to the survey. The month that got the most marks, with 42, was June. Both of the other two summer months, July and August, received 35. May was the only other month that received above 30, with 31. Overall the spring months seemed to be more popular than fall months, and



November and December were the least popular two. All of the totals and months are listed in Table 19.

Besides time of year it was also important to know whether parents felt that during the week or on the weekend would be better, as well as if the morning or the afternoon would be better. First the parents were asked which was better, during the week or on the weekend. The parents could mark either option, or both if they wanted, and some actually went on to add their own options of “during the week in the summer” or during the weekend in fall/spring”. Fifty-three respondents indicated that the weekend would be better and 15 respondents indicated that during the week would be better. Four people added their own text next to the categories indicating that during the summer months middle of the week programs were better, but during the school year weekend programs were better. After responding to this question the parents were then asked to indicate whether the morning or afternoon would be better. Again the parents could respond to either option or both if they wanted. Forty-one people marked the morning as the best time of day and 31 people marked the afternoon. Only five people marked both of the options as being good times, with one person not responding to the question at all.

After the time frame section of the survey was the cost section which was designed to gather information about what the parents were willing to pay for. The first question presented the parents with a long list of costs and what they would get for that price, and asked the parents to mark each of the options listed that they were willing to pay for. The option that seems to be the most popular amongst the respondents was the \$15 or less option with 49 parents indicating this is an amount they are willing to pay. The least popular option was the \$120 or more for a series of programs with two parents indicating this is something they would be willing to pay for.

The \$365 or more for a weekend program option was also not popular with the parents; three parents marked this one as something they were willing to pay for. The complete list of cost options and how many parents were interested in each option is included in Table 20 below.

Table 20 – How Much the Parents are Willing to Pay for Different Types of Programs

<b>Cost Options</b>	<b># of times marked</b>
\$15 or less for a half day including programming	49
\$15 or more for a half day including programming	18
\$30 or less for a one day including programming, snack & lunch	42
\$30 or more for a one day including programming, snack & lunch	17
\$120 or less for a series of programs, 5 days, 2 hours each day, including programming	11
\$120 or more for a series of programs, 5 days, 2 hours each day, including programming	2
\$365 or less for a weekend including all programming, food and lodging	13
\$365 or more for a weekend including all programming, food and lodging	3

The second question related to cost was about different incentives that programs use to attract parents attention and try to get them to attend the program. The parents were presented with a list of different free incentives that could be offered at a family program and asked which one(s) they would most like to receive. The parents could mark as many of the options as they wanted, or as few as they wanted. The majority of the parents, 53 out of 68, felt that some kind of take home craft that was related to the topic of theme from the program was the best incentive to come to a program. The other options that were explained on the list all got around the mid twenties for the total of votes. All of the options and the total of times indicated are listed in Table 21 below.

Table 21 – Incentives Parents Would be Most Interested in Receiving

<b>Incentive Options</b>	<b># of times marked</b>
Free T-shirt	28
Access to purchasing materials used during the program, such as equipment, story books, teaching materials, etc	26
Hand-outs about related activities that could be done at home	25
Take-home crafts such as bird feeders, bird houses, etc	53
Information about other places with similar programs, or other programs being offered at the same facility	22
Other	1

The last question in the survey asked the parents about the best means to make them aware of the program, the best methods of advertisement. The options that the parents were given reflected common methods of advertisements that other nature centers use, or methods of advertisement that the CWES currently uses to tell parents about programs. Newspapers, radio, TV, school newsletter, websites, and public bulletin boards were all included on the list of possible places to advertise. The parents could mark as many or as few of the options as they wanted. The options are all described and listed with how many parents marked each in Table 22. Sixty parents indicated that their preschool newsletter was a method of advertisement that they would see. Second to the school newsletter was the newspaper with 37 parents saying that an advertisement placed there they would be likely to see. Television was the next highest marked option with 23 parents indicating this was a good method of advertisement. Radio, public bulletin boards and websites were only indicated by a few parents each as a way to reach them through advertising.

Table 22 – Methods of Advertisements the Parents feel they are Most Likely to See

Advertising Methods	# of times marked
Newspaper	37
Radio	12
TV	23
Preschool Newsletter	60
Website	6
Public Bulletin Board	9
Other	2

### **C. Objective Three**

*Objective three: The third objective was to develop a family program for CWES that reflects what parents asked for and adopts features of other successful programs.* The results of the research that was done included the actual program, the advertising that was done for the program, and the registration format that was set up.

#### **1. Description of the Program**

The development of the program and all of the activities was directly based on the data that were gathered from the first two objectives. The theme of the program was chosen because the parents indicated from the surveys that forests were one of the most popular areas of interest to children at this stage. The theme was turned into a title for the program “Discover the Wonder of the Woods”. The forest theme that was chosen guided the development of all the activities and other components of the program.

Once the overall theme was chosen the learning goals and objectives for the program needed to be established which would guide the development of the activities for the program.

Three goals were created for the program, 1) the preschool children will learn more about forest ecosystems, 2) the preschool children will learn about certain forest animals, their daily lives, and how they move, 3) the preschool children and their parents will gain a closer look at a habitat that may be right by their homes. From these three goals specific learning objectives were established. Four objectives were created for the program, two cognitive objectives, one affective objective and one psychomotor objective. The first cognitive objective for the program is “after completing the program the preschool children will be able to name three animals that live in a forest”. The second cognitive objective for the program is “upon completion of a hike the preschool participants will be able to describe two or three characteristics of a forest”. The affective objective is “after completing the story book portion of the program the preschool participants will be able to describe three aspects of a day in the life of forest animals”. The psychomotor objective for the program is “the preschool participants will be able to demonstrate how one forest animal moves, and how that movement is different from the way they move”. These four objectives were created and reviewed with the help of professors, and peers in Natural Resources 410/610, Applied Program Evaluation, section 851.

With the theme, goals and objectives all established the activities and format for the program needed to be established. The survey from the parents revealed that they were more interested in seeing a program developed with activity stations that they could set their own time limits for but have less guidance from an instructor. This format for a family program can be difficult to organize and no other nature centers were found to be organizing their programs in this manner. The decision was made, with the help of the graduate advisor and the CWES core

staff that the activity station format would not work out for the type of program that was being developed.

The activity station concept would however be used while the parents were arriving. Four stations were set up in one main area so that as parents and their children were arriving they could rotate around the stations and have something fun to do while everyone waited for the rest of the participants to arrive. The first station was the “Touch Discovery” station. At this station families found five different cloth bags, each bag with a different item in it that can be found in the forest. The instruction card at this station instructed the parents to have their child put their hand inside one bag at a time and just use their sense of touch to try and determine what forest item is in the bag. The second station was the “Forest Coloring” station. This simple station had pictures of forest plants and animals that the students could color with crayons and markers. Station three also had to do with forest animals, however this station had real animal pelts and bones for the children to look at and touch. The instruction card for the parents at station three, the “Forest Animal” station, instructed the parents from which animal each of the pelts and bones came from. The last station was the “Animal Footprints” station. At this station families found stamps of all different forest animals that they could use to create tracks of the different animals on pieces of paper. These stations were set up so that there is plenty of room for several families to participate in the station at one time and the families could do each activity for as long as they would like until all of the registered families had arrived.

From the research on nature centers and preschool programs the decision was made to use a children’s book as a major part of the forest program for the CWES. The children’s book “Lost in the Woods” by Carl Sams and Jean Stoick (2004) was chosen because of the uniqueness

of the pictures and the accurate depiction of forest animals. The children's book was used at the beginning of the program to introduce the families to the forest concept and many of the forest animals that would be talked about throughout the rest of the program. Following the children's book the families were asked questions about some of the animals within the book to focus the children's attention on certain animals that could be found in Wisconsin forests and more specifically the animals that were focused on in the remainder of the program.

Besides the story book the remainder of the activities for this program were selected for the most part based on what parents felt their children were most interested in. The top six activities that the parents chose included playing in sand or soil, looking for or at wildlife, gathering or collecting things, games, fishing and arts and crafts. Not all of these activities could be included in one family program so four out of these six activities were chosen for this forest program.

Following the children's book the "Animal Movement Simulation Activity" was done. This activity, which resembled a game to the preschool children, would give the families an opportunity to compare the way different forest animals move and get to act out some of these movements. The whole group learned and acted out different animal's movements together in a group and then a game of follow the leader occurred where the families took turns leading the group and deciding which animal the rest of the group should try and move like.

The animal movement activity led the group directly into the next activity, the "Forest Exploration Hike". Each family was given a small cloth bag, magnifying glass, and bug box to take with them on the hike. As the group hiked along a trail the families were given opportunities to go off trail and explore different parts of the forest and different signs of

wildlife. The families were also encouraged to collect small non-living items that they found in the forest to be used in an art and craft project done later in the program.

The hike led the families to the building where the next activity would take place. This activity was a craft project that the families would do using the items that they collected from the forest. The “Forest Collage” activity allowed the families to create a three dimensional representation of the forest that they could take home with them.

The final activity of the program was the “Animal Matching Activity” which would give the children a chance to show how much they learned from the program. They tried to match up pictures, examples and descriptions of the five animals that were talked about during the program, homes and food sources for those animals. Each child was asked to raise their hands when they think they can create a match between one of the animals and some aspect of their daily life. This final activity would also act as one of the methods of evaluation for the program. For a more complete description of this activity and the entire family program see Appendix I.

After the program had been fully developed a list of materials was compiled to determine what materials the CWES already had and what if any materials would need to be obtained. There were only a few supplies that needed to be purchased. The CWES did not already have the storybook that would be used, so that was purchased. Photocopies needed to be made for the coloring activity, the advertisements and the Parent Packet (described below), so paper was included as a material that would need to be purchased. The craft would use hot glue guns and glue. The CWES already had hot glue guns, but more glue needed to be purchased just to be sure that there was enough. The three materials that were needed to be purchased for the program included the storybook, paper and hot glue.



At the end of the program the families were thanked for coming and each family received a “Parent Packet”. This folder contained all kinds of helpful information for the children and parents. The parents were provided with extensive information about the Wisconsin State Park System. This information included the official brochure of the park system, printed information from the Wisconsin Department of Natural Resources website on all the interpretive services that are provided in state parks and forests. Information was also included on the “Forests Forever ParkPack” program that exists at many of the state parks. A brochure from the Wisconsin Department of Natural Resources entitled “Wisconsin Forests; Questions and Answers” was also enclosed that contained valuable information about the trees and forests in this state. For the children the packet contained Wisconsin Wildcards on many forest animals and invasive species that were donated from the Department of Natural Resources. Each packet also contained two copies of the magazine “Your Big Backyard” from the National Wildlife Federation, which contains articles and activities for children (Dalheim, 2007). There were also copies of certain pages from a book entitled “A Field Guide to Nearby Nature”. The pages would help the children and families identify and learn about many forest animals, plants as well as animal tracks, and other signs of wildlife (Kochanoff, 1994). Both of the brochures from the Central Wisconsin Environmental Station were also included in the packet. This packet was provided to the parents to help them continue teaching their children about forests and to continue their own education on Wisconsin forests.

## **2. Advertising**

Once the “Discover the Wonder of the Woods” program was developed an advertising strategy needed to be developed. The information gathered from the parent survey was again

helpful in determining where and how to advertise for the program. Most parents felt that advertisements about educational programs would best reach them through their child's preschool. A flyer was developed (see Appendix) that was mailed out to the teachers that were involved with giving out the initial surveys. The teachers were given enough flyers to give out one flyer to each of the parents. The flyer described what the program was, who it was meant for, when it would be held, where it would be held and how much it would cost. The flyer is included in Appendix K.

In addition to sending flyers to the parents at their preschools a news bulletin was sent out to all of the local papers in central Wisconsin. This method of advertisement was chosen because the results from the survey revealed newspapers as the second most popular method of advertisement. Working with Stephen Menzel, Development and Public Relations Coordinator, and Thomas Miller, Senior University Relations Specialist and Legislative Liaison, a media advisory was developed. There would be no guarantee that any of the papers that were contacted would run the media advisory, but since it is a local story there might be more interest and a better chance that it could be included. To see the media advisory see Appendix L.

The parent survey also showed that radio and television commercials can be effective ways to reach parents, however the small budget that is being used to create this program and most environmental education programs does not allow for such expenses. Instead the next most popular method of advertisement was used, public bulletin boards. A second flyer was developed with most of the same information as the first that would be hung at libraries, toy stores, book stores and grocery stores. This flyer is included in Appendix M.

### **3. Registration Format**

The final phase of getting the program ready was creating a format of registration so that parents would know what to do or who to contact in order to register for the program. The flyer that was sent out to all the teachers had a detachable registration form for the parents to fill out and mail in with the program fee. Because the space for the program would be limited to a small number the top of the registration flyer indicated that the parents should call the Central Wisconsin Environmental Station (CWES) first to check on space availability before they sent in the registration form. The office manager at the CWES was informed about the program and accepted the responsibility of passing along any phone calls about the program to the appropriate voicemail. The other two forms of advertisement that parents could see regarding the program indicated that pre-registration was required and that parents should call the CWES for more details. These parents were told whether or not there was still space available for the program and for how much and to whom they should make payment for the program. This system of registration was set up so that no additional unnecessary work was placed on the core staff of the CWES, especially the office manager.

### **D. Objective Four**

*Objective four: The fourth objective was to implement the family program that was developed.* The implementation of the program took place on March 17<sup>th</sup>, 2007 from 9:00 till 11:00 am. The volunteers that were asked to participate and help with the program arrived at approximately 8:30 am. There were four volunteers that helped with the implementation and evaluation of the program. The volunteers included, a past graduate assistant and summer camp

director of the CWES, a UWSP graduate student in Environmental Education and Interpretation, a UWSP graduate student in Environmental Education and Interpretation and CWES graduate assistant, and an undergraduate UWSP student that is also a CWES practicum student and past CWES summer camp counselor. These volunteers were chosen for their experience with environmental education, program evaluation and the CWES. All volunteers were made aware of what part in the program they would be given and were given the opportunity to look over the type of evaluation that they would be performing and become familiar with it and ask questions if they had any.

Four families, eight people total, participated in the program. Three of the families consisted of a parent and their preschool aged child. One child had their mother, two had their father. The last family was a grandmother and her granddaughter. Three of the children that attended the program were male and the other was female. Two of the children knew each other from a daycare center that they attended and the other two children knew each other from the preschool that they attended. This created an interesting dynamic because the group was split between the two sets of children that knew each other. One family arrived about fifteen minutes early and had some time to enjoy the activity stations that were set up. Another family showed up a few minutes late for the program, but all the families had at least a few minutes to look at the stations and do at least one or two.

All money that was used to develop the program was kept track of to determine whether or not the program was profitable for the CWES. Advertising, such as printing posters and flyers, cost the CWES \$10.00 in paper and printing costs. The parent packets that were put together cost \$5.00 for the folders and cost of printing and copying the hand-outs. Other

materials that were included in the packet were donated. Supplies for the program, such as the storybook, paper, and hot glue, cost \$30.00. The families were provided with a snack at the program which was a \$2 cost per person. With eight people attending the program the cost of the snack was \$8. The total cost for the CWES to host the program was \$61.00. The families were charged \$12 for one parent and one preschool aged child. Eight people attended the program, so the income was \$48 from the program. This left a negative balance of \$13 from the program. To see the budget for the program see Table 23.

Table 23 – Budget for Family Environmental Education Program

<b>Budget for Family Environmental Education Program</b>				
Advertising		\$10.00		
Parent Packets		\$5.00		
Supplies		\$30.00		
Snack	\$2/person x 8	\$16		
		\$61.00	Total Expenses	
	\$12/family x 4	\$48	Total Income	
		-\$13	Balance	

The program was designed to focus on Wisconsin forest animals, however to make the program even more focused five animals were selected to concentrate on. These animals were selected for several reasons. All five animals were present in the storybook that was read at the beginning of the program and could be talked about in connection to the book. The five animals are also fairly common animals that the children and families may have seen in the wild or had some previous knowledge of. Four out of the five animals are also commonly seen at the

CWES, so evidence of their presence would be easier to find and point out to the families on a hike. The five animals that were chosen were deer, wolf, rabbit, squirrel and a cardinal.

## **E. Objective Five**

*Objective five: The fifth objective was to evaluate the family program to determine if the development and implementation were successful.* The evaluation of the family environmental education program was done through four methods. Two volunteers performed observations of the program using the observation evaluation form found in Appendix N. The other two volunteers performed post-program interviews with two parents immediately following the program using the interview form found in Appendix P. The alternative assessment was done as the last activity of the program and the post-program survey was sent out to the families 30 days after the program.

### **1. Observation Evaluation**

The observation form was used to complete two observation evaluations of the family environmental education program. Both observers were given the observation form ahead of time so that they could familiarize themselves with the form and ask any questions that they may have. The observation began with the first activity, the story book reading. During the storybook reading the two observers noticed that one student was very fidgety, playing with his shoes, looking out the window or pulling down his pant legs. However they both made note that even this one student that was not fully engaged would still look back at the book and about 75% of the time was focused on the book. Both observers noted that all of the children and parents kept their eyes on the book and instructor a majority of the time, were not talking to adults or

other children during the activity and were fully doing the activity. Observer number one noticed that towards the end of the book reading activity, after about twelve minutes, the children overall were only 75% focused and engaged on the book. Observer number two noticed that towards the end of the discussion following the storybook reading the one boy that had been fidgeting a great deal got up to go sit on the lap of his father, and then another child copied him and went to sit with her grandmother. As for overall enjoyment both observers believed that 75% of the children “really enjoyed” the activity, 25% of the children “enjoyed” the activity, and 100% of the parents “really enjoyed” the activity.

The observers were asked for each activity if they observed that the activity was a “good fit” for the development stage of a preschool child. The observers believed that the storybook activity was a good fit for the preschool children and their parents. Comments included that the storybook was a good introduction, set the mood for the program, wasn’t too long, and kept them engaged.

The second activity was the animal movement activity. This activity began at 9:21 and lasted for 10 minutes. Both observers noted that the children were fully engaged with the activity and that the parents were engaged by encouraging their children, however only one parent actually did the animal movements with their child. Some of the children were shy about leading the follow-the-leader portion but remained engaged by doing motions and following, even though they did not want to lead. Throughout the activity both observers observed that there was limited to no interaction between the children and adults, that the children were all doing the activity and kept their eyes on the instructor. A comment made by both observers was that one child was quite a bit shy about participating at first than the other children, but

participated close to her grandmother. The parents were also fully engaged throughout the activity with their eyes either on their children or on the instructor. The observers indicated that 100% of the children and parents “really enjoyed” the activity.

The observers both noted that the activity was a “good fit” for the preschool children and their parents. Observer number two commented that “they got to move like animals and learn at the same time”. Observer number one thought that the sequence between the first activity and this one made it a good fit for this age because “after sitting for a story they always need to get up and move around”. The observers commented that the parents could have participated a bit more by actually doing the animal movements, but their encouragement and presence was still important.

The third activity was the forest exploration hike which began at 9:32 and lasted for a half an hour. The observers noted that all the children and parents were engaged with the activity the entire time. The observers noted that the children’s did not keep their eyes on the instructor during this activity unlike during the first two activities, but one observer noted that this was only because they were too busy looking around, or looking at what the instructor was pointing out. The interactions between the parents and their children were higher during this activity than during previous activities, with parents leading their children in different directions during different free exploration times and pointing out other things that they saw to their children. There was very limited to no interaction amongst the children during this activity.

Observer number one commented on one child’s intense interest in a set of deer tracks. The child was seen bent over looking at a hole in the snow and the instructor went over to explain that it was a deer foot print. The child then got very interested and began following the



tracks, using his magnifying glass to look down inside each one. After walking about 40-50 feet the father of the child called the boy back and the boy was smiling and appeared very excited. Throughout the entire activity both observers indicated that 100% of the participants, both children and parents “really enjoyed” the activity.

Part of the forest exploration was collecting non-living items on the forest floor that the families wanted to keep for later for a craft project. The observers believed that this made the activity a perfect fit for this age level because it gave them something to hunt for and touch. The amount of time was also mentioned as being a good fit for this age group, not too long but long enough that they really got a good hike.

The families were given a bathroom break and a 15 minute snack time after the hike. During this time the children ate cookies, brownies and popcorn and looked at birds and squirrels out the window. Some parents sat and ate with their children while a few talked together about different topics. As the families finished their snack they participated in some of the activity stations so more, or watched out the windows until the other families were done.

Once snack time was over the collage craft activity began at 10:22 and lasted for twenty minutes. The families were each given their own station to work at with a large tree cookie, glue gun and the bag of items that they had collected on the hike. The observers noted that all of the families were fully engaged with the activity for the first ten minutes. The children began to get a little distracted around 15 minutes into the activity and began to look out the windows and play with the coloring activity station. During the last few minutes the observers noted that most families were done and had gone to the bathroom to wash hands. The families did interact

during this activity more than during other activities, according to the observers. Items that one family did not want or need they offered to other families.

The observers indicated that 100% of the children “really enjoyed” the activity and a majority of the parents were at the same level. However, observer number one noted that where most of the adults were laughing and chatting with their child one adult was simply gluing items and did not interact very much with the other families. The positive interactions that occurred during this activity were commented on by both observers. Observer two noted that “this promoted great parent/child relations”, and observer one noted that the children and adults worked very well together.

The last activity began at 10:48 and was the matching activity. The observers noted that raising hands and taking turns during this activity was very difficult for the preschoolers to do. Throughout the activity all four of the children were engaged and two of the parents were engaged, the other two parents were talking to each other and looking at the collages. The children had their eyes on the instructor throughout the activity, were participating in the activity but again were having a difficult time raising their hands to answer the questions.

The level of enjoyment of this last activity is somewhat different from the two observers. Observer number two indicated that all the children “really enjoyed” the activity, while observer number one indicated that two children “really enjoyed” the activity, one “enjoyed” the activity and the last child “somewhat enjoyed” the activity. For parent enjoyment observer number two noted that two of the parents “really enjoyed” the activity while the other two only “enjoyed” the activity. Observer number one believed that all four parents “really enjoyed” the activity.

Both observers believed that this activity acted great as a way to evaluate the knowledge gained of the children, but since the parents did not participate the activity did not evaluate the parents. One suggestion made by observer number one was that smaller pictures of each of the animals could be given to each child and then they could hold up the animal that they thought went with each of the other categories. This way the instructor would get answers from each child instead of having to rely on raising hands.

The observers were asked to evaluate at the end of the program whether or not they believed each of the objectives of the program were accomplished and if each of those objectives were age appropriate. Both observers indicated that each objective was accomplished during the program, however comments were also made by both observers that the second objective was not completely accomplished. The second objectives states “upon completion of a hike the preschool participants will be able to describe two or three characteristics of a forest” and the observers believed that the students only learned about two characteristics; trees and animals. The observers also indicated that the objectives were also completely age appropriate for the preschool children and their families. However, they also both noted that it is difficult to tell the appropriateness of some of the activities and to determine that amount of knowledge gained by at least one student because they were so shy and may not have fully participated in each activity the entire time.

There are some trends and valuable information that can be drawn out of the observational evaluations. First of all, it seems that for most of the activities the children were engaged and enjoyed the activities to a certain point. Overall the observers believed that if the activity lasted a bit long the children may begin to become distracted by other things around

them. Observers also believed that the parents enjoyed the activities and participated in most of the activities as well. The parents did not participate in certain activities as much as may be expected but had some good interactions with their child during the hike and the craft activities.

The children's personalities also played a role in what was observed. Two of the children were very outgoing and not shy or reserved at all and the observers commented frequently that the other two children were the ones frequently not fully engaged or participating. This may have also influenced how well the alternative assessment can really tell knowledge gained by the child participants. Because two of the children were so shy they did not respond immediately to the matching questions and sometimes only responded after other children had already shouted out the answer.

## **2. Alternative Assessment**

The alternative assessment activity occurred as the final activity of the family environmental education program and the associated grading rubric was completed immediately. When the final activity began the families were asked to come and sit down in front of the fireplace, just as they were asked to do for the storybook reading at the beginning of the program. However, only the children came and sat down; the parents stayed back a few feet away at tables. Five animal pictures were spread out in front of the children. The children were first asked to identify each of the animals by raising their hands and saying one animal at a time. Two out of the four children immediately raised their hands and when not immediately called on began shouting out what the animals were. After the five animals had been named the children that had not directly participated were asked if they agreed with what had been said. One child nodded his head at this question and another child did not respond. The one child that did not

respond during the matching activity had been able to name some of the forest animals earlier in the program and so some credit was given on the grading rubric.

Next, the children were told they would be trying to match up these five animals with their homes and their food source. The pictures of the animal homes were held up one a time and shown to the children. The children were then asked for each picture which animal might live in the home. Three out of the four children were able to identify four out of the five animal homes, either by raising their hands and describing who might live in the home, or by pointing to the animal that might live in the home. One child was able to correctly match all five of the animal homes either by describing which animal might live in the home, or by agreeing with other children as to which animal might live in the home. Once the homes were all correctly matched to the animal the pictures of the homes were placed next to the picture of the animal.

Finally, the children were asked about what the animals would eat in the forest. One child was able to correctly match all five examples of food sources to the animal that might eat that food. Two students accurately matched four out of the five animals to their food source either by raising hands and stating which animal would eat certain foods, by pointing to the correct animal or by nodding in agreement to what someone else said. One student did participate fully in this portion of the activity and only responded to three out of the five food sources and was only nodding in agreement to what other children were stating. This child was given credit for matching three animals because of the agreement that the child showed in what other children were saying.

The grading rubric was used to rate how each child did on the matching activity and how much knowledge was believed the four children had at the end of the program. Two children

were given fourteen out of fifteen; one child was given eleven out of fifteen and the last child got ten out of fifteen. The children were able to identify a majority of the animals that were discussed during the program and also did well identifying the homes where these animals would live. The children had the most difficult time connecting the five animals to their food source. The score breakdowns on the matching activity are all included in Appendix R.

### **3. Post-Program Interviews**

Two interviews were conducted immediately following the program. The parents were all asked if there were two people that would be willing to participate in a short evaluation interview and two parents volunteered. The children stayed with other volunteers and worked at the activity stations while the two parents were taken to separate rooms with two other volunteers to conduct the interviews. The interview evaluation form was used by both volunteers to conduct the interviews.

Both parents being interviewed brought their five year old son with them to the program. Both parents described a lack of interest in the program or topic at first but grew more interested at a certain point. Interviewee number one described how their son got more interested once the program began, and interviewee number two stated that their son became more interested in the program when he knew a friend was going to be there. Both interviewees stated that the nature walk and the craft project were the two activities that they enjoyed the most. Interviewee number one also felt that the storybook activity made the children feel welcome and comfortable with the program and the instructor. The interviewees were probed, after talking about which activities they liked, to find out more about what they did during the activities. Interviewee number one responded that he felt his role was to support his son, but also stated that it was nice

to be able to spend time with just one son and do something together. The other interviewee did not have anything else to add about the activities.

The interviewees were then asked about what knowledge they had gained from the program. Interviewee number one felt that he had gained more knowledge about plants and animals in the forest, but more than that learned a great deal about the CWES and the facility. Interviewee number two believed that she had gained knowledge in the area of where the animals lived.

The next question aimed to gain information from the parents on how they might feel their child's attitude about forests might have changed after having attended the program. Interviewee number one felt that his son had gained a great appreciation for the forest and an understanding of the role that plants and animals play in the community. Interviewee number two stated that her son already enjoys being in the woods, but may have gained more knowledge about where exactly certain animals live, and that the program brought the information down to his level.

The parents were both asked what changes they felt could be made to the forest hike to increase the level of exploration and both of the parents made comments about the weather in response to this question. Interviewee number one felt that the cool weather on the day of the program was not great, but realizes that it is difficult to work with the weather and other than that had no major change suggestions. He also mentioned that the stops that were done on the hike to point out signs of wildlife helped to bring the information down to the children's level and helped the families to notice things they would have otherwise missed. Interview number two felt that the snow still on the ground reduced the amount of exploration that was possible, but

also had no major change suggestions. She also stated that when the parents were instructed that they could go off trail it helped the parents to feel comfortable taking their children in different directions to explore.

The parents were asked if they felt as a result of the program that they would increase the amount of time that they took their child into the woods on their own time. Interviewee one felt he would and interviewee two thought it would probably be about the same because they already spent so much time in the woods. The parents were then asked about what resources they felt would help them explore nature. More half day family programs was the response from interviewee one. He also felt that during the program more guidance could have been given to the families about what to do with the equipment they were given for the forest hike because he felt his son was not really sure what to do with the bug box. Interviewee two felt that there was a need for parents to have resources that can tell them what to do in the woods, or what to point out, as well as activities that could be done together in nature.

Content was another question that the parents were asked about. Interviewee one felt that a program on water exploration would be nice because at this age his son is very interested in aquatic insects and collecting them. Interviewee two believes that programs on Wisconsin animals are very interesting and important. Along with being asked about different contents that could be used the parents were also asked about other possible locations that could be used for implementing family programs. Interviewee one felt that more local places would be good and mentioned three spots that might be able to be used: Schmeckle Reserve, the Ice Age Trail, and Lion's Camp. Interviewee two felt that the CWES was a wonderful spot for these types of events.



The last two questions of the interview allowed the participants to add any additional information that they had about family programs in general or the specific family program that they just attended. Interviewee one when asked about family programs in general stated “It’s good to bring families together; we are involved in a lot of things but sometimes its hard to find things that you can get involved in that involve nature.” When asked about the specific program he had just attended he stated “Very well put together. Enjoyable day. I wish more people had taken advantage of it. My wife found out about it at school. Being the weekend before spring break probably affected this.” Interview two stated that more family programs should be offered and on a more regular basis. In response to the specific program she had just attended interviewee two was very pleased with the program and instructor.

Overall the responses from both parents made it seem by the interviewers that the parents were very glad they had attended the program and seemed to have gotten a lot out of it. Both parents made reference to the comfort level of the families and how certain things were done that increased the comfort level at different points for the children and the parents. Bringing information down to the level of the children was also mentioned by both parents as having occurred during the program. The interviews revealed as well that the parents felt knowledge had been gained by both the children and the parents from the program. Both parents also felt that guidance and resources such as activities, information and more programs could be helpful for parents to feel more comfortable and to know what to do with their children in nature.

#### **4. Post-Program Survey**

The 30 day post-program survey was sent out to all four families that attended the program. Two families, out of the four, completed and returned the survey. The compiled results from the survey can be found in Appendix R.

The survey began with seven Likert-style questions. A statement was made about some aspect of the program or the families lives since attending the program and the families were asked to indicate if they strongly agreed, agreed, were neutral, disagreed, or strongly disagreed with the statement. Question one asked the parents if their family had enjoyed the program. Both parents that completed the survey indicated that they strongly agreed with the statement that they and their child enjoyed the program they attended at the CWES. The second question stated that the parent and child had discussed the program and the information that they learned at the program since attending the program. The results showed that both families agreed with this statement. The survey then made the statement that the child's interest in forests had increased since attending the program. One parent indicated they were neutral on this statement and one indicated they agreed with the statement. The fourth statement was that the child's interest in forest animals had increased since attending the program and showed the same results as the third question, with one parent neutral and one parent agreeing. The fifth statement was again related to the interests of the child, this time about animals in general and where they live. The results were the same on this one as well, one neutral and one agreeing. The next statement claimed that the parent and child have spent time exploring forests since they attended the program. One parent disagreed with this statement, while one parent agreed with this statement. The final statement referred to whether or not the parent felt their child had retained information

about forests and forest animals. One parent felt neutral about whether their child had retained information, and one parent agreed with the statement feeling their child had retained information.

The eighth question on the survey asked the parents how much they would be willing to pay for different types of programs. This question was taken directly from the parent survey that was done to gain information from the parents during the program development phase. The two most popular options indicated by both parents was \$15 or less for half a day including programming and \$30 or less for a one day including programming, snack and lunch.

The ninth question asked the families if they had plans to attend another family program at CWES or another location and they were suppose to circle yes or no. Both surveys indicated yes they had plans to attend other programs.

The tenth question listed six different program topics and asked the parents to rank the options indicating which option they were most interested in, ranked one, to the option they were least interested in, ranked six. Like question eight, this question was taken directly from the previous parent survey. The topic of land animals was the topic ranked number one by both parents. The next topic of most interest was aquatic animals with a ranking of three by one parent and a ranking of two by another parent. To see the complete list of topic rankings see Appendix R.

Question eleven asked the parents if there were other programs at other nature centers that they are planning on attending or know about. Both parents responded no to this question.

The final question asked the parents if there was anything else that they would like to share about the family program that they attended at the CWES a month ago. The quotes from the two parents in response to this question are listed below.

- I thought it was well constructed for the age group and the right amount of time for a 4 year olds attention span.
- I thought the program was a lot of fun. The teacher was very enthusiastic. My son really enjoyed the craft project. Well done.

Overall the high level of enjoyment is shown through the responses from this survey. For one family the program served to increase both interest levels and interaction with forests, whereas the other family was neutral about increase in interest levels and did not believe the program had increased the amount they interacted with forests.

The two questions that were taken from the parent survey done earlier in the research helped to support what parents had already stated. Land animals is the topic most popular with parents on both surveys. The two most common amounts indicated by the parents that they were willing to pay was \$15 or less and \$30 or less. These results were the same as on the earlier parent survey.

The survey revealed that the parents had interest and intention to participate in additional events. This was discovered through question nine with both parents responding yes to the question that they had plans to attend other family programs at CWES or other locations. However, both parents indicated that they did not know of any other programs being offered at other centers.

## **CHAPTER FIVE**

### Outline of Chapter Five – Conclusions, Inferences and Recommendations

#### V. Conclusions, Inferences and Recommendations

##### A. Introduction

##### B. Conclusions

1. Financially Sound
2. Replicable
3. Accomplishes Objectives
4. High Rate of Attendance
5. High rate of Enjoyment
6. High rate of Information Gained
7. Intention to Participate in Additional Event
8. Ability to Change Attitudes
9. Other Conclusions

##### C. Inferences

##### D. Recommendations

1. Recommendations for Future Programs
2. Recommendations for Future Research

## **V. Conclusions, Inferences and Recommendations**

### **A. Introduction**

This research has collected a lot of data from what is currently being done in the field, from parents in the central Wisconsin area and from the participants of the program that was implemented and evaluated. All of these data have led to a great deal of information gained for the researcher and has ultimately led to many conclusions about family environmental education programs. The ultimate goal of this project was to create a successful family environmental education program based on research done on other programs in the country and what parents would like to see developed in a family program at the Central Wisconsin Environmental

Station. The definition for a successful program as it pertains to this project is an event that is financially sound, is replicable, accomplishes the objectives specified for it and results in a high rate of attendance, enjoyment, information gained, intention to participate in additional events, and ability to change attitudes. The data that were collected can be used to determine what aspects of the program were successful.

## **B. Conclusions**

It can be concluded that out of the eight indicators of a successful program determined by the definition of a successful program the “Discover the Wonder of the Woods” program was successful for six out of eight of those indicators. Overall the program was successful in many areas even though it was also unsuccessful in others. The program was not financially sound due to the low rate of attendance. This is a huge problem for family environmental education programs at centers like the Central Wisconsin Environmental Station. However many factors may have gone into the low rate of attendance such the timing of spring break or the weather. As was mentioned before if the program were held again the expenses would be much less because some of the materials have already been purchased, potentially increasing how much money could be gained. The fact that those families that did attend seemed to have had such a positive experience, showed high levels of enjoyment, knowledge gained and intention to participate in additional events shows that on other levels the program was very successful.

### **1. Financially Sound**

During the development phase of the family program all expenses were kept track of. Since this program had never been done before some materials were needed to be gathered, so an exact budget was not available before the program began. As much material as was possible was

obtained through donations, or activities were designed around materials that were already available at the CWES. The purchasing of materials for the program and the parent packet and advertising cost the CWES \$45. The addition of a snack cost the CWES \$2 per person that attended the program. This brought the expense total up to \$61 dollars. With only four families registering for the program there was not enough money brought in to cover all of the expenses. The program ended up costing the CWES \$13 instead of making any money. It can be concluded that this program was not financially sound.

Even though this part of the program was not successful it may be inferred that if the program were to be implemented again at the CWES profit would be likely. Since the majority of the materials have already been gathered and only some photocopying would need to be done there would be very minimal expense besides the snack. By even having just a few families register for another program money could be made. It may also be inferred that from a program development and implementation standpoint this program was relatively inexpensive; very little output cost went into the program. The fact that the program was not financially sound had little to do with too much money being spent on the program; it was directly linked to the low attendance of the program.

## **2. Replicable**

The second aspect of a successful program was the idea that the program needs to be replicable; that after the research was over the program could be repeated by other staff at the CWES. Everything that was developed for the program was fully documented, explained and provided to the staff at the CWES. The information about the program was laid out in such a way that it would be very easy for another staff member or volunteer to easily pick up the

information and put together the program. The CWES also has access to all of the materials and information that were required for the program so that if the program were to be repeated the materials would be available.

### **3. Accomplishes Objectives**

Objectives are established for programs to guide the development and establish exactly what the instructor intends for the participants to learn and a program cannot be successful if the objectives are not accomplished. The family environmental education program “Discover the Wonder of the Woods” had specific program objectives (see Appendix I for list of objectives) and these objectives were evaluated during the program through an observation evaluation. Two observers were asked to monitor throughout the program whether or not they saw these objectives being accomplished. At the end of the observation evaluation, both observers stated that they felt each objective was accomplished and was age appropriate for the group. The observers both stated that one objective was written ambiguously. The observers believed that because the objective was written unclearly it could be interpreted as not having been fully accomplished. The observers were referring to the second objective which stated that “upon completion of a hike the preschool participants will be able to describe two or three characteristics of a forest”. The objective does not specify the number of characteristics that the children should be able to describe - two or three. The observers felt that the children would be able to describe two characteristics of a forest, plants and animals, but would not be able to describe a third characteristic. The objective states that the children should be able to describe two or three characteristics and since they would be able to describe two the objective was accomplished. The objective was just not written clearly enough. Even with this one area of



confusion it can still be inferred that the objectives were accomplished and that the program was successful in this area.

#### **4. High Rate of Attendance**

A high rate of attendance or participation can be defined as public involvement in an event sufficient to pay all overhead costs and make the organization money, if that was the intent of the program. The family environmental education program was intended to be another way to make profit for the CWES. Unfortunately this level of attendance was not reached by this program. As was discussed before, the program did not make a profit because there was such a low number of participants. Had two more families registered and attended the program then it would have been financially sound and obtained a high rate of attendance.

One reason for the low attendance that was brought up during one of the post-program interviews is that the event was held on the first Saturday of spring break for many schools in the area. Families may have been heading out of town or had other plans scheduled a while ago and could not have attended the program. One of the interviewees stated in response to a question that it was a shame more people had not taken advantage of the program and thought maybe it had something to do with the timing of Spring break.

Another reason for the low attendance could be the weather. The temperatures were cool the week prior to the program and were expected to be cool on the day of the program, but more than that there was still several inches of snow on the ground. Parents may have felt that the snow would limit the amount their children could really explore or learn about a forest. This point was also brought up in both post-program interviews. The interviewees had concerns about the program and felt that a higher level of enjoyment and exploration could have been

obtained if the weather had been better. It is impossible to know for sure at this point why people that saw the advertisements or received a flyer did not choose to attend the program, but listening to what the parents who did attend the program gave as possible reasons can be helpful information when planning for future events.

### **5. High Rate of Enjoyment**

Family environmental education programs need to be positive experiences to help build children and family connections to the natural world. If these programs are not positive and enjoyable experiences families will not continue seeking out the natural world, learning about the natural world or wanting to help protect the natural world. Ensuring that families enjoy the program also helps to ensure that they will be participating and learning from the program. The level of enjoyment of the children and parents was a major focus of the observation evaluation that was performed during the program. During each activity of the program the observers were asked to analyze how well they thought the families were enjoying the activity. For every activity the observers noted a high level of enjoyment for both the children and the parents that were participating in the program. The observers noted that during the activities most of the children were participating and engaged with the activities. This provides good evidence that the children were enjoying the activities. The observation provides good evidence that the children had a high level of enjoyment.

The post-program interviews that were conducted show that the parents also had a high level of enjoyment. Comments were made by both interviewees about aspects of the program that parents enjoyed. “Very well put together, enjoyable day I wish more people had taken advantage of it” said interviewee number one. A comment made by the second

interviewee also shows the high level of enjoyment by the participants; “It was very good. Abbie did a good job, she was animated and energetic, she kept the kids active and held their attention. She is a wonderful teacher. I just thought it was very good”. This high level of enjoyment by the parents is very important because in order to have children attend these program parents have to see the benefit and find them enjoyable so they will be more inclined to return for another program.

The 30 day post-program survey also asked the parents again about the level of enjoyment for the family. Both parents indicated on the survey that they strongly agreed with the statement that they and their child enjoyed the program that they attended at the CWES. This shows that even a month after the program the families still saw the event as an enjoyable experience.

## **6. High Rate of Information Gained**

The goal of these family programs is not only to provide positive affective experiences for the families but also to provide the families with cognitive knowledge about the natural world. The objectives are established so that this learning can take place and can occur in an organized way. The evidence that was provided to show that the objectives were accomplished, what the observers took note of, goes a long way to show that there was knowledge gained. The alternative assessment also shows that the children left the program with a majority of the knowledge that was desired for them to gain. The scores on the alternative assessment show that each of the children knew over half of the information that was presented during the program at the end of the program. The information gained may have even been higher than that but since

some of the children were more reluctant to participate it was difficult to get a full accounting of each child's knowledge gained.

Knowledge gained by the parents is important to these programs as well. The post-program interview asked the parents what knowledge they felt they had gained from the program. Both of the interviewees were able to describe knowledge they had gained from the program they had just participated in. One parent described the program as a good review while the other parent said they gained more information about where the animals actually live in the forest. Another area where knowledge was gained was with regards to the CWES in general. One parent described how he learned a great deal more about the facility, what takes place there, what programs are offered and recent improvements to the grounds and buildings. Though this knowledge gain was not directly related to the objectives of the program it can be a benefit to any facility. Getting people more interested in or attached to nature centers like the CWES can only increase the benefit those centers may have. If a parent participant sends a child to a summer camp at the CWES the family program will have been extremely successful from the financial standpoint and will have been successful at providing another child with an additional chance to encounter the natural world. Getting people to support the CWES by sending their children to camp programs helps to subsidize the school environmental education programs that are offered year reaching thousands of students every year increasing each of those students environmental knowledge base.

### **7. Intention to Participate in Additional Events**

Programs, in order to be successful, need to leave the family with the desire to want more. This could mean more environmental knowledge, more resources to explore the natural world on their

own or more programs that they can attend with their children. Evaluating whether or not a program left the participants wanting more can be difficult, but certain information can help. During the post-program interview the parents were asked if there were other locations where they would be interested in seeing family programs offered. Had a parent responded to this question by saying they couldn't think of any, they didn't know, or they didn't care that might be a fairly clear sign that they had no intention of participating in additional events. One of the responses to this question from an interviewee described several places that could be used for family programming and even gave suggestions as to what types of programs could occur in one of those places. The other interviewee stated that the CWES was the perfect facility for this type of program and when asked later for additional thoughts on family programs described that possibly holding one each month would be nice. This statement clearly shows that if the programs were offered this parent would be more than likely to attend those programs.

The parents that responded to the 30 day post-program survey also support the conclusion that the program results in a high level of intention to participate in additional events. Both parents indicated that they had plans to attend another family program at CWES or another location. This response shows that not only do these parents intend to participate in family programming, but within a month of attending the program the parents have plans to take their child to other programs.

### **8. Ability to Increase Environmental Sensitivity**

Finally, in order for a program to be successful it needs to have an influence on the participant's level of environmental sensitivity in a positive way. This, just like intention to participate in additional events, can be a very difficult thing to quantify or observe. The level of

enjoyment seen by the parents and the children and the knowledge that was gained by the parents and children goes a long way to show that there was the potential for an increase in environmental sensitivity. The parents were asked in the post-program interview if they felt their child's attitude with regards to forests would change as a result of participating in this program. One interviewee thought that his son had gained more appreciation for the forests. Greater appreciation could lead to greater understanding and empathy for the natural world. The second interviewee felt that the knowledge gained was most likely what her son got out of the program and more specifically that he understood more about the forest at his own level. Bringing nature down to the level of the audience and connecting the resource to the audience in that way can be a very powerful way to build bonds between children and the environment. This bond could contribute to creating positive outdoor experiences that have been shown in the research to increase environmental sensitivity. Because both parents interviewed described the family program as being a positive outdoor experience and the observers both noted high levels of enjoyment for the families, the program can be described as a positive outdoor experience that may contribute to the increase in environmental sensitivity.

## **9. Other Conclusions**

It can be concluded that family environmental education programs are an excellent way to present environmental information to children. The high level of enjoyment and knowledge gained show that this type of programming has the potential, when combined with other experiences, knowledge, and guidance, to create individuals that will act as environmentally responsible citizens in the future because of the positive experiences they have had in the past. The knowledge gained and high level of enjoyment was not only experienced by the children but

also by the parents that attended the program. Family programs have the ability to bring enjoyment in the outdoors and environmental knowledge to children and their parents.

From this research it can also be concluded that environmental education can be effective with children as young as preschool age. The children that attended this family program gained environmental knowledge and had a positive experience which may increase their desire to learn more about the natural world in the future. This conclusion supports the research that has been previously done by many others in the area of early environmental education and reviewed in the literature review. This conclusion is being drawn from the research done from the fourth and fifth objectives of the project.

It can be concluded that at this time with the staffing structure that the CWES currently has family environmental education programs designed and implemented in this manner may not be an effective way to reach a public audience. Enough volunteers to develop, market, and implement these types of programs are not currently available to create regular family programs. This conclusion is being drawn from the research done from the third, fourth and fifth objectives of the project.

### **C. Inferences**

1. It can be inferred that because the family program was held on the first Saturday of spring break for many people in the area the attendance was lower.
2. It can be inferred that if this program was marketed and implemented in just the same way on a weekend occurring in the month that the parents indicated in the survey was

most convenient at the Central Wisconsin Environmental Station that it would be fully successful according to the definition of successful in this project.

3. It can be inferred that if the CWES was to develop a “Friends” group or some other volunteer network that could coordinate the marketing and implementation of family programs that this type of public program could be an effective way for the “Friends of CWES” to reach a public audience.
4. It can be inferred that because the program was designed for and marketed specifically to preschool aged children and their parents, charging extra for siblings, that parents were less inclined to bring their entire family.
5. It can be inferred that while results can only be generalized to the CWES, other similar facilities may be able to utilize the survey information from the parents or the “Discover the Wonder of the Woods” program at their facilities.

#### **D. Recommendations**

Recommendations for both general family programming and for future research in this specific area can be made. The recommendations made for family programs can be used by staff at the CWES and staff of other facilities interested in creating or implementing family environmental education programs. The recommendations for future research can be used by future graduate students or the staff of the CWES to continue looking at the needs, interests and desires of the people of this area and what they would like to see developed in family programming.



## **1. Recommendations for Future Programs**

If future family programs were to be developed at the CWES there are a few suggestions that could help make the program potentially more successful. First, it is recommended that a family environmental education program be developed around an aquatic theme. If this program were held for families in the summer it could be very popular. The popularity of these topics was discovered through the second survey sent to parents and through the post-program interview.

The “Discover the Wonder of the Woods” program was designed specifically for preschool children, marketed mostly to preschool children only stating very briefly on the flyers that siblings were welcome. It is recommended that a program be developed for a wider range of children encouraging families to bring all of their children to the program instead of just one. The implementation of the program for this research only had two person families attend the program, one parent or guardian and the preschool child, even though on the surveys parents expressed that they were more interested in attending a program with their whole family. Advertising the program as open to families of all sizes and ages would make the program more difficult to develop and implement but has the potential to increase the attendance rate. However, the researcher that develops a program for a wide range of ages or the whole family should also be prepared for the one-parent—one child dynamic because this may still occur. This could be an interesting type of family program to implement and test at the CWES.

Family environmental education programs and public programs in general are an excellent way for the graduate assistants that work at the CWES to get experience in program design, program implementation, budgeting and working with volunteers. If future programs

were developed or implemented it is recommended that the graduate assistants take the lead on developing and implementing these programs. Currently the CWES holds about two large public programs each year and the whole core staff works together to organize and implement these events. In the future it may be possible to require of the graduate assistants to host more public or family programs throughout their time at the CWES and take a larger leadership role. Placing more of the responsibility on the graduate assistants would help to remove some of the stress of hosting these programs from the director and program coordinator. More importantly providing this opportunity to the graduate assistants would help the graduate assistants gain more valuable experience to help them in the future but would also help the CWES reach a wider audience.

For any future family or preschool environmental education program it is recommended to maintain the aspect of multi-disciplinary programming. This mix of different types of activities helps to keep the children and parents interested in the topic. With preschool programming especially having the students do something calm and then something that is more active can be a great way to hold their attention. Using a multi-disciplinary approach can also be a great way to reach an audience of diverse learning styles and a wide range of ages. Programs should strive to include games, psychomotor activities, detail oriented hands-on activities such as crafts and activities that get the children out into nature to encounter the topic first hand.

Finally, the parent packet that was put together for the “Discover the Wonder of the Woods” program was developed because the parents indicated on the survey that information about other programs and resources to use at home was important to have. Also noted in the post-program interview was the idea that parents are just not sure what to do with their children on their own in the environment and needed more information to talk with their kids about.

When the parents were given the packets at the end of the program they were very excited about getting information to take home and activities that they could do with their children. It is important to continue the families' interest in the topic of the program after having attended the program. If the families maintain a high level of interest they are more likely to go out on their own to encounter the topic or seek out other family programs. It is recommended that some sort of take home parent resource, such as the parent packet that was used for this program, be given out to participants at family programs.

## **2. Recommendations for Future Research**

The findings of this research point to several recommendations for continuing research in family environmental education programs.

The first recommendation for future researchers would be to diligently seek outside sources of funding to support the research. This research was funded by a \$500 grant from the Student Research Fund, some printing and copying provided by the CWES and personal funds contributed by the researcher. The lack of additional grant support meant that the number of surveys that could be sent out was limited and the sending out of reminder letters, additional survey mailings and other advertisements was also limited. If more funding had been available other marketing methods could have been attempted, a larger audience could have been surveyed and more reminder postcards could have been mailed. The additional mailings may have increased the return rate and additional marketing may have increased the attendance of the program.

The second recommendation is to survey parents of other aged children. The surveys that were done for this research focused just on parents of preschool aged parents. To get a true

picture of what parents want to see in family programs surveys should be administered to parents of children of all ages. Teachers at grade schools, middle schools and/or high schools could be contacted and asked to participate in much the same manner that the preschool teachers participated. By surveying a wider age range of children's parents more insight could be gained about how to make general family environmental education programs successful at the CWES and other facilities.

The third recommendation is to develop, implement and evaluate additional family environmental education programs. The programs could be on different topics, have a larger sample size or be implemented at a different location in order to gather more data on the effectiveness of family programs. A program developed around a water theme or other native Wisconsin animals could be implemented at the CWES to compare the attendance rates and other aspects of successful program implementation with what was discovered for the forest themed program. Developing programs around other topics and implementing them in a similar fashion to how the forest program was implemented would also help to eliminate one potential reason for the low attendance rates.

A fourth recommendation is to assess the distance that families are willing to travel for a family program. This question was not one that was asked at any point during this research but is a question that could be helpful to understanding if certain program formats are possible or would be effective at the CWES. Knowing if parents are not willing to travel long distances for a short program could help environmental education centers that are not located directly in cities discover how they need to be marketing to the public and what kind of programs to develop.

A final recommendation for future research in the area of family program development is to use a pre-test—post-test control group design. The research that was done for this project did not include a pre-test of child or parent knowledge. The lack of pre-test limits the data that can be analyzed to determine how much knowledge was gained from the program. If a pre-test—post-test system were used clearer data could be gathered as to how much information the families gained specifically from the program they attended. The inclusion of a control group would also help provide evidence to show how effective the program was at increasing the knowledge of the families.

Any further research that is done will only continue to help the Central Wisconsin Environmental Station and other environmental education centers to understand how to successfully develop and implement family programs.

## References

- Ballantyne, R., & Packer, J. (2005). Promoting environmentally sustainable attitudes and behavior through free-choice learning experiences: What is the state of the game? [Special issue]. *Environmental Education Research*, 11(3), 281-295.
- Ballantyne, R., Fien, J., & Packer, J. (2000). Program effectiveness in facilitating intergenerational influence in environmental education lessons from the field. *Journal of Environmental Education*, 32, 8-15.
- Ballantyne, R., Connell, S., & Fien, J. (1998). *Environmental Education Research*, 4(3), 285.
- Bay Beach Wildlife Sanctuary. Retrieved September 2006. Website [www.baybeachwildlife.com](http://www.baybeachwildlife.com)
- Bennett, D. (1984). *Evaluating Environmental Education in Schools; A practical guide for teachers*. UNESCO-UNEP International Environmental Education Programme: Division of Science, Technical and environmental Education.
- Butterfly House. Retrieved September 2006. Website [www.butterflyhouse.org](http://www.butterflyhouse.org)
- Carson, R. (1956). *The Sense of Wonder*. New York: Harper Collins Publishers.
- Central Wisconsin Environmental Station. Updated January 10<sup>th</sup>, 2007. Website [www.uwsp.edu/cwes](http://www.uwsp.edu/cwes).
- Chenery, M. F., Hammerman, W. (1984) Current Practice in the Evaluation of Resident Outdoor Education Programs: Report of a National Survey. *Journal of Environmental Education*, 16(2), 35.
- Dalheim, Mary. (2007). Your Big Backyard. National Wildlife Federation. 11(1).
- Doan, Marlyn. (1979). *Starting Small in the Wilderness*. San Francisco: Sierra Club Books.
- Fontana, A. and Frey, J.H. (2000). The Interview: From Structured Questions to Negotiated Text. In N.K. Denzin and Y.S. Lincoln (Eds.), *Handbook of Qualitative Research*. California: Sage Publications.
- Falk, J. H. (2005). Free-Choice environmental learning: framing the discussion [Special Issue]. *Environmental Education Research*, 11(3), 265-280.
- Ginsburg, H. and Opper, S. (1969). *Piaget's Theory of Intellectual Development*. New Jersey: Prentice Hall, Inc.

- Gullo, D. (1992). *Developmentally Appropriate Teaching in Early Childhood*. National Education Association.
- Hart, D. (1994). *Authentic Assessment: A Handbook for Educators*. Menlo Park, CA; Addison-Wesley Pub. Co.
- Heimlich, J. E. (2005). Editorial [Special issue]. *Environmental Education Research*, 11(3), 261-263.
- Henry, G.T. (2005). Surveys. In Mathison, S. *Encyclopedia of Evaluation*. Thousand Oaks, California: Sage Publications.
- Hohmann, M. and Weikart, D.P. (1995). *Educating Young Children; High/Scope Educational Research Foundation*. High/Scope Press. Ypsilanti, Michigan.
- Hungerford, H., Litherland, R., Peyton, R., Ramsey, J. and Volk, T. (1992). *Investigating and Evaluating Environmental Issues and Actions: skill development modules* (Champaign, IL, Stipes)
- Hungerford, H. and Volk, T. (1990). Changing learner behavior in environmental education. *The Journal of Environmental Education*. 21(3), 8-21.
- Kalamazoo Nature Center. Retrieved September 2006. Website [www.naturecenter.org](http://www.naturecenter.org)
- Kochanoff, Peggy (1994). *A Field Guide to Nearby Nature*. Montana: Mountain Press Publishing Company.
- Kola-Olusanya, A. (2005). *Environmental Education Research*, 11(3) [Special issue], 297-307.
- Korth, Luke. Gordon Bubolz Nature Preserve. Retrieved September 2006. Website [www.bubolzpreserve.org](http://www.bubolzpreserve.org)
- Krueger, R. (1988). *Focus Groups; A Practical Guide for Applied Research*, California: Sage Publications, Inc.
- Lee, J. and Ma, W. (2006). Early Childhood Environmental Education; A Hong Kong Example. *Journal of Applied Environmental Education and Communication*. 5:83-94.
- Leedy, P.D. and Ormrod, J.E. (2005). *Practical Research; Planning and Design*. New Jersey: Pearson Education Inc.

- Liu, Shih-Tsen and Kaplan, M. (2006). An Intergenerational Approach for Enriching Children's Environmental Attitudes and Knowledge. *Journal of Applied Environmental Education and Communication*. 5:9-20.
- Mandernach, J. (2003). *Incorporating authentic assessment*. Retrieved December 2006, from Park University Faculty Development website:  
[http://captain.park.edu/facultydevelopment/authentic\\_assessment.htm](http://captain.park.edu/facultydevelopment/authentic_assessment.htm)
- Marcinkowski, T.M. (1993). Assessment in environmental education. *Environmental Education Teacher Resource Handbook*. 143-197.
- Marrell, W., and Bixler, R. (2003). A simple survey-based summative evaluation method for school field-study programs. *Interpretive Sourcebook*. Nevada: interPress. 48-49.
- Maykut, P. and Morehouse, R. (1994). *Beginning Qualitative Research; A philosophic and practical guide*. Washington D.C.: The Falmer Press. 46-114.
- Missouri Botanical Garden. Retrieved September 2006. Website [www.mobot.org](http://www.mobot.org)
- Moorcroft, T., Desmarais, K., Hogan, K., and Berkowitz, A. (2000). Authentic Assessment in the informal setting: How is can work for you. *The Journal of Environmental Education*. 31(3), 20-24.
- Mueller, J. (2003). *Authentic Assessment Toolbox*. Retrieved July 2004, from the North Central College website: <<http://jonathan.mueller.faculty.noctrl.edu/toolbox>>.
- Museum of the Hudson Highlands. Retrieved September 2006. Website [www.museumhudsonhighlands.org](http://www.museumhudsonhighlands.org)
- National Science Foundation. (1997). *User-Friendly Handbook for Mixed-Method Evaluations*. Retrieved December 2006. NSF 97-153. Arlington, VA: NSF.  
 <<http://www.ehr.nsf.gov/EHR/REC/pubs/NSF97-153/start.htm>>.
- New Canaan Nature Center. Retrieved September 2006. Website [www.newcanaannature.org](http://www.newcanaannature.org)
- Oltman, M. (Ed.). (2002). *Natural Wonders; A guide to early childhood for environmental educators*. St. Paul, Minnesota: Minnesota Children's Museum and the Minnesota Office of Environmental Assistance.
- Palmer, J. A., Suggate, J., & Mathews, J. (1996). Environmental cognition: early ideas and misconceptions at the ages of four and six. *Environmental Education Research*, 2(3), 301-329.



- Patton, M.Q. (1997). *Utilization-Focused Evaluation: The New Century Text*, 3rd ed., Thousand Oaks, CA: Sage Publications.
- Pocono Environmental Education Center. Retrieved September 2006. Website [www.peec.org](http://www.peec.org)
- Regnier, K., Gross, M., & Zimmerman, R. (1992). *The Interpreters Guidebook; Techniques for Programs and Presentations*. University of Wisconsin-Stevens Point, WI: UW-SP Foundation Press, INC.
- Russ-Eft, D.F. (2005). Questions, Evaluation. In Mathison, S. *Encyclopedia of Evaluation*. California: Sage Publications.
- Sams, C.R. and Stoick, J. (2004). *Lost in the Woods: A photographic Fantasy*. Milford, Michigan: Carl R. Sams Photography, Inc.
- Shaw Nature Reserve. Retrieved September 2006. Website [www.shawnature.org](http://www.shawnature.org)
- Sivek, D.J. (2002). Environmental Sensitivity among Wisconsin High School Students. *Environmental Education Research*. 8(2), 155 – 170.
- Sivek, D.J. and Hungerford, H. (1989-1990). Predictors of responsible citizen behavior in members of three Wisconsin conservation organizations. *The Journal of Environmental Education*, 21(2), 35-40.
- Stapp, W., et al. (1969) The Concept of Environmental Education. *The Journal of Environmental Education*. 1(1), 30-31.
- Storksdieck, M., Ellenbogen, K., and Heimlich, J. (2005). Changing minds? Reassessing outcomes in free-choice environmental education. *Environmental Education Research*. 11(3), 353-369.
- TeacherVision. *Authentic Assessment*. Retrieved December 2006. Website [www.teachervision.fen.com](http://www.teachervision.fen.com)
- UNESCO. (1977, 14-26 October). Final Report - Tbilisi. Paper presented at the Intergovernmental Conference on Environmental Education, Tbilisi, Republic of Georgia, 26-7
- Washington State Department of Ecology. (1992). *Designing Community Environmental Education programs: A guide for local government*. Olympia, WA: Washington Department of Ecology Publication Office.

Wiltz, K. (2001). *Proceedings of the Teton Summit for Program Evaluation in Nonformal Environmental Education*. Kelly, WY: Teton Science School.

## **CHAPTER SIX**

### Outline of Chapter Six – Appendices

Appendix A – Focus Group Information

Appendix B – Informal Information Letter to Parents for Open-ended Survey

    Appendix B1 – Consent Form for Open-ended Survey

    Appendix B2 – Open-ended Survey to Parents

Appendix C – Pilot Test Questionnaire

Appendix D – Informal Information Letter to Parents for Second Survey

    Appendix D1 – Consent Form for Second Survey

    Appendix D2 – Second Survey to Parents

    Appendix D3 – Prize Drawing Slip

Appendix E – Cover Letter to Teachers

Appendix F – Reminder Letter to Second Survey

Appendix G – Open-ended Survey Results Compiled

Appendix H – Second Survey to Parents Results Compiled

Appendix I – Family Program Description

Appendix J – Validity Panel Letter

    Appendix J1 – Validity Panel Instructions

Appendix K – Family Program Mailing Advertisement

Appendix L – Media Advisory

Appendix M – Family Program Flyer

Appendix N – Observation Form

Appendix O – Alternative Assessment

Appendix P – Post-Program Interview

Appendix Q – Post-Program Survey

Appendix R – Alternative Assessment Grading Rubric Totals

Appendix S – Interviews Transcribed

Appendix T – Post-program results compiled

## Appendix A

### Focus Group Information

The focus group questions were developed and then reviewed by fellow graduate students, the graduate committee members, and the Institutional Review Board. This review process ensures the validity of the instrument, making sure that the questions being asked are worded in a way that is not biased, can not be misinterpreted by the participants and will cause no harm to the participants. The parents were to be asked the following questions:

1. What do your preschool age children enjoy doing outside?
2. Think back to the last time you spent time outside with your child. Describe that experience and what you and your child did.
3. Were there other children involved with this experience, either related, or not related? What was the interaction between your child and the other children?
4. What outdoor concepts, or objects, such as insects, animals, plants, the soil, etc. does your child find most interesting?
5. How long do you feel that specific interest can hold your child's attention at any given time?
6. What resources, if any, have you sought, or would you seek, to help encourage your child interest, or help them to learn about the interest?
7. Think about a family environmental education program based on that topic of interest. What would you want your child to do at that program or learn about at that program?
8. How do you feel a family environmental educational program designed for your preschool child would benefit you?
9. Is there anything else you would like to add?

Each question is designed to gain certain information. Question one is an introductory question, getting the parents used to talking about their children and their outdoor

activities, and to start to find out what their children are doing outside. The second question is focused on who and what is involved with their child's outdoor play. Does it mostly occur on playgrounds, in the backyard, with parents or siblings, etc? Its purpose is to help to gauge how involved the parents are with their children when they are outside. Question three is a follow up question for question two. This question will provide information about how interactive their children are at this stage with other children when they are outside. The fourth question will begin to provide topical focus for the program. The goal is to find out if preschool children are noticing the small things around them, single objects and ideas, or if they are still focused on the whole. For example, does a preschool child notice what is in soil when they dig, do they notice an insect, or a root, or is the child still so enthralled with just the act of digging that they do not notice anything else? Question five is a follow-up to question four and is designed to find out the attention span of preschool aged children. The remaining questions will all link back to the interest that the individual parents described in question four and will require them to build off of that. Question six is trying to find out 1) if parents actively encourage their children's interest in the outdoors and 2) if they feel resources are readily available to them to be able to do so. With question seven the desire is to focus the parents on the topic more specifically and try to gauge the interest that these parents would have in participating in a family environmental education program. This question is also trying to find out the types of values that parents with preschool age children wish to teach their children. For example, if they have a child interested in insects would they want an educational program for their child to focus on finding and catching insects for closer inspection, teaching their child what insects are dangerous or teaching their child

about how useful insects can be in their backyards. Question eight is attempting to find out how parents feel a family environmental education program would benefit them. Would they see it as a babysitting service for a day, would they see it as a great way to become actively involved in their child education, or would they see it as a way for them to relearn things that they themselves may have forgotten? The last question is a way to provide the parents with an open-ended opportunity to express anything else that may have come to them or that they may have forgotten to express in response to a previous question. The responses were to be recorded electronically and on paper during the focus group. Once the responses had been formally written up, the participants would have been given the opportunity to read over the conversation to ensure that their perspectives on the topic have been recorded accurately.

## Appendix B

Dear Parents,

As a parent, your help is needed to increase our understanding of young children and their interests in the out of doors. Your knowledge and experience as the parent of a preschool child/children is especially important. While there are many family programs for children in kindergarten through twelfth grade, there are few for children younger than kindergarten. Information gained from your response will be used to develop a family environmental education program to teach children and their parents about the natural environment.

Please fill out the attached survey and return it to the teacher at your child's preschool. The survey includes nine open-ended questions and should take no more than 15 minutes to complete. Please also sign the attached University consent form for participating in the study. All of the information from the survey will remain completely confidential.

For completing the survey you'll be given the opportunity to participate in a drawing for one of two children's books donated by the University Bookstore or a free registration for day camp held at the Central Wisconsin Environmental Station. The day camps are designed for children ages six to nine, and ten to twelve. So while your preschool aged child wouldn't be able to participate, an older sibling would be able to enjoy a fun day of outdoor learning at the Central Wisconsin Environmental Station. The day camps run from 8:00am to 4:30pm, include meals and snacks and will be offered on June 14<sup>th</sup>. All of the participants that wish to be in the drawing should fill out the below form and then three people will win the prizes.

If you would like more information please contact Abbie by email ([aenlu661@uwsp.edu](mailto:aenlu661@uwsp.edu)) or by phone (715) 544-0145.

Thank you for your time. Without your help this research would not be possible.

Abbie Enlund  
Graduate Student  
College of Natural Resources

Dr. Daniel Sivek  
Professor  
College of Natural Resources

---

If interested in the drawing, tear off this form and return it to Lorrie Richardson

\_\_\_ Yes, I would like to have my name placed in the drawing for the day camp spot.

\_\_\_ Yes, I would like to have my name placed in the drawing for one of the two children's books.

Parent's Name

Phone #

Best time to reach me is:

Please return this form to the teacher at your child's preschool. Thank you.

## Appendix B1

### **Informed Consent to Participate in Human Subject Research**

Abigail Enlund, an Environmental Education and Interpretation Graduate student at the University of Wisconsin Stevens Point, is conducting a research project to develop and implement a family environmental education program for the Central Wisconsin Environmental Station. You are being asked to participate in this research.

As a part of this study you will be asked to participate in a survey where you will be asked questions about your child's outdoor activities, what they enjoy doing outdoors, with whom they spend their outdoor time with, and how long certain activities can hold their attention.

This survey is extremely important to this research project because it will guide the development of the topic or theme of the family program, and the types of activities that could take place during the program. The responses to the questions will also provide information about the developmental stage of these children, and the exposure that they have to the outdoors.

Since the questions that you will be asked are about your child your responses will remain anonymous. Each of the participants will be assigned a number and in the published form of the research project no names will be used, only the representing numbers. There will be no other medical or emotional risks to participating in this focus group.

As a result to participating in this focus group you will become aware of the Central Wisconsin Environmental Station and what they offer to central Wisconsin. You will also be informed about the upcoming family program that will be offered there. An additional incentive will be offered to those who participate. This incentive is a drawing to receive either a free children's book from the University Bookstore, or a free participation in a day camp offered at the Central Wisconsin Environmental Station. There will be two children's books in the drawing and one spot in the day camp that will be in the drawing. Parents who wish to be in the drawing for the book or a day camp spot will be asked to fill out an additional form so that if they win they can be contacted.

This survey is completely voluntary and you may refrain from answering any of the questions. If you have any questions about your responses, the use of the information, or the research project in general please feel free to contact

Abigail Enlund  
Graduate Student  
Environmental Education and Interpretation  
University of Wisconsin  
Stevens Point, Wisconsin  
715-544-0145

If you have any complaints about your treatment as a participant in this study or believe that you have been harmed in some way by your participation, please call or write:

Dr. Sandra Holmes, Chair  
Institutional Review Board for the Protection of Human Subjects  
Department of Psychology  
University of Wisconsin B Stevens Point  
Stevens Point, WI 54481 (715) 346-3952

Although Dr. Holmes will ask your name, all complaints are kept in confidence.  
I have received a complete explanation of the study and I agree to participate.

Name \_\_\_\_\_

Date \_\_\_\_\_

(Signature of subject)



## Appendix B2

# Survey on Environmental Education

Please answer the questions below to the best of your ability. Once you have filled out the survey please return it, the signed consent form, and the form to submit your name in the drawing to the “return form box” by the sign in computer.

1. What does your preschool age child/children enjoy doing outside?
2. Think back to the last time you spent time outside with your child. Describe that experience and what you and your child did.
3. Were there other children involved with this experience, either related, or not related?
4. What outdoor concepts, or objects, such as insects, animals, plants, the soil, etc. do you find your child to be most interested in?
5. How long do you feel that specific interest (mentioned in your answer to #4) can hold your child=s attention at any given time?



## Appendix C

### Pilot Test Questionnaire

Please take another few minutes to answer these questions about what you think of the survey itself, and how it could be changed or improved to be easier or more convenient.

1. Was the survey easy to understand? \_\_\_ Yes \_\_\_ No

If no, what was difficult to understand?

2. Was there enough space between questions to answer them completely? \_\_\_ Yes \_\_\_

No

If no, where is more space needed?

3. Were there any questions you feel were missing from the survey related to family environmental education programs? \_\_\_ Yes \_\_\_ No

If yes, what questions should be added?

4. Are there any questions in the survey that you feel could be taken out? \_\_\_ Yes \_\_\_

No

If yes, which questions do you feel should be taken out?

5. What do you feel would be a good incentive to get parents to return the survey?

**Thank you so much for your help and your time.**

## Appendix D

Dear Parents,

As a parent, your help is needed to increase our understanding of young children's interests in the out of doors and what you as a parent would like to see them learn more about. Your knowledge and experience as the parent of a preschool child/children is especially important. While there are many family programs for children in kindergarten through twelfth grade, there are few for children younger than kindergarten. Information gained from your response will be used to develop a family environmental education program to teach children and their parents about the natural environment.

Please fill out the attached survey and return it in the self addressed stamped envelope. The survey includes both open-ended questions and multiple choice questions and should take no more than 15 minutes to complete. Please also read the attached University consent form for participating in the study. All of the information from the survey will remain completely confidential.

For completing the survey you'll be given the opportunity to participate in a drawing for several amazing prizes. The prizes include a children's book, a autographed copy of "Teaching Kids to Love the Earth", and free admission to a day camp at the Central Wisconsin Environmental Station. All of the participants that wish to be in one or all of these drawings should fill out the prize drawing form and send it in with the completed survey.

If you would like more information please contact Abbie by email ([aenlu661@uwsp.edu](mailto:aenlu661@uwsp.edu)) or by phone (715) 544-0145.

Thank you for your time. Without your help this research would not be possible.

Abbie Enlund  
Graduate Student  
College of Natural Resources

Dr. Daniel Sivek  
Professor  
College of Natural Resources

## Appendix D1

### **Informed Consent to Participate in Human Subject Research**

Abigail Enlund, an Environmental Education and Interpretation Graduate student at the University of Wisconsin Stevens Point, is conducting a research project to develop and implement a family environmental education program for the Central Wisconsin Environmental Station. You are being asked to participate in this research.

As a part of this study you will be asked to participate in a survey where you will be asked questions about what outdoor topics and activities your child is most interested in, what types of programs you feel your family would be most likely to attend, and many other questions about the type of program format that you would find most appealing.

This survey is extremely important to this research project because the information from the survey will directly affect how the program is developed for the Central Wisconsin Environmental Station, and provide information for other centers about what parents would really like to see in family environmental education programs.

Since the questions that you will be asked are about your child your responses will remain anonymous. Each of the participants will be assigned a number and in the published form of the research project no names will be used, only the representing numbers. There will be no other medical or emotional risks to participating in this survey.

As a result to participating in this survey your school will become aware of the Central Wisconsin Environmental Station and what they offer to central Wisconsin through advertisements, and brochures. You will also be informed about the upcoming family program that will be offered there. An additional incentive will be offered to those who participate. This incentive is a drawing to receive a prize that will be directly beneficial to you and your children, such as a children's book or other great prizes. Parents who wish to be in the drawing will be asked to fill out an additional form so that if they win they can be contacted.

This survey is completely voluntary and you may refrain from answering any of the questions. If you have any questions about your responses, the use of the information, or the research project in general please feel free to contact

Abigail Enlund  
Graduate Student  
Environmental Education and Interpretation  
University of Wisconsin  
Stevens Point, Wisconsin  
715-544-0145

If you have any complaints about your treatment as a participant in this study or believe that you have been harmed in some way by your participation, please call or write:

Dr. Karlene Ferrante, Chair  
Institutional Review Board for the Protection of Human Subjects  
Academic Affairs Office  
University of Wisconsin-Stevens Point  
Stevens Point, WI 54481  
(715) 346-3712

Although Dr. Ferrante will ask your name, all complaints are kept in confidence.

Your completion and submission of the survey to the researchers represents your consent to serve as a subject in this research.

This research project has been approved by the UWSP Institutional Review Board for the Protection of Human Subjects.

Appendix D2  
**Survey on Environmental Education Family Programs**

Please answer all of the following questions with regard to your preschool age child to the best of your ability. All responses will be kept completely anonymous.

Thank you.

---

**General Questions:**

1. What is your gender?  Male  Female
  
2. Please indicate the size of the town or area in which you and your family live.  
 Over 50,000 residents  
 40,000 – 49,999 residents  
 30,000 – 39,999 residents  
 20,000 – 29,999 residents  
 10,000 – 19,999 residents  
 Under 9,999 residents  
 Unincorporated village  
 Rural area or farm
  
3. Please indicate how many children you have.  
 One child  
 Two children  
 Three children  
 Four children  
 More than four
  
4. What are the ages of each of your children?
  
5. What type of school do your children attend?  
 Public  
 Private, non-church affiliated  
 Parochial  
 Home-schooled
  
6. How old are you?
  
7. Have you, or your children, ever attended a function at the Central Wisconsin Environmental Station before?  
 yes  no If yes, please describe.
  
8. Have you, or your children, ever attended any kind of environmental education function before as a family? (guided hikes, animal demonstrations, bird watching classes, etc)  
 yes  no If yes, please describe.

**Content Related Questions:**

9. Would you be more interested in attending a program designed around?  
 Water  Forest
10. If a program were designed around one of these more specific topics which would you be most likely to attend?  
 Land animals  
 Aquatic animals  
 Land insects  
 Aquatic insects  
 Plants  
 Non-living topics; rocks, minerals, soil

**Activity Related Questions:**

11. Please rank (1 – most interested, to 5 – least interested) which of the following program formats you would prefer. A program for  
 just you and your preschool aged child where you participate in the activities together.  
 just for you and your preschool aged child where there are separate educational programming for adults, and the children.  
 your whole family where you participate in the same activities together throughout the entire program.  
 your whole family where your children participate in separate age appropriate activities the whole time.  
 your whole family where your children participate in separate age appropriate activities for part of the time, and joint activities some of the time.
12. Please indicate how interested you think your child could be in the following activities.

	Very interested	Somewhat interested	Not interested
Woodland hikes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Catching land insects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Catching aquatic insects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Swimming	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fishing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Boating	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Games	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Arts/crafts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Playing in sand/soil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Looking for/at animals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gathering/Collecting things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

13. Would you and your child be more comfortable with  
 \_\_\_ Participating in one activity at a time with a structured time limit and an instructor that helps with the activity the whole time; or  
 \_\_\_ Activity stations where the child can choose which activity to do and how long to do it, but with limited guidance by an instructor other than the parent.
14. While participating in family program activities would you rather,  
 \_\_\_ participate in activities just with your family, or  
 \_\_\_ be mixed with other families participating in the same activity?

**Time Related Questions:**

15. Please indicate which of the following program formats would work best for your family?

	Work Best	Work OK	Not Work Well
A half-day/several hour family program,	___	___	___
A one day, one time family program,	___	___	___
A series of day programs built on the same topic,	___	___	___
A weekend/overnight family program.	___	___	___

16. How long do you think your child would enjoy/be able to handle participating in one activity?

17. What would be the best time of year for a family program to fit into your schedule? (Mark all that apply)

___ January	___ April	___ July	___ October
___ February	___ May	___ August	___ November
___ March	___ June	___ September	___ December

18. Would you be more willing/able to attend a family program  
 \_\_\_ during the week or  
 \_\_\_ during the weekend?

19. Would you be more willing/able to attend a one day family program  
 \_\_\_ in the morning or  
 \_\_\_ in the afternoon?



**Cost Related Questions:**

20. How much would you be willing to pay for a program? (Mark all that apply.)
- \$15 or less for a half day including programming.
  - \$15 or more for a half day including programming.
  - \$30 or less for a one day including programming, snack & lunch.
  - \$30 or more for a one day including programming, snack & lunch.
  - \$120 or less for a series of programs, 5 days, 2 hours each day, including programming
  - \$120 or more for a series of programs, 5 days, 2 hours each day, including programming
  - \$365 or less for a weekend including all programming, food and lodging
  - \$365 or more for a weekend including all programming, food and lodging
21. Which additional incentives, if included in the above costs, might make the program more appealing?
- Free t-shirt
  - Access to purchasing materials used during the program, such as equipment, story books, teaching materials, etc.
  - Hand-outs about related activities that could be done at home
  - Take-home crafts such as bird feeders, bird houses, etc.
  - Information about other places with similar programs, or other programs being offered at the same facility.
  - Other, please describe. \_\_\_\_\_

**General Program Development Questions:**

22. Which source would you be most likely to see an advertisement for an environmental education family program? (Mark all that apply)
- |   |  |
|---|--|
| <input type="checkbox"/> Newspaper            | <input type="checkbox"/> Website; please indicate where, _____ |
| <input type="checkbox"/> Radio                | <input type="checkbox"/> Public bulletin board, location _____ |
| <input type="checkbox"/> TV                   | <input type="checkbox"/> Other, please describe, _____         |
| <input type="checkbox"/> Preschool Newsletter | _____  |

**Thank you for filling out the survey. Don't forget to fill out the prize drawing slip!**

Appendix D3

**Prize Drawing Slip**

If you would like to be included in the drawing for the prize please fill out the following entry slip, detach it, and turn it in with the survey. Thank you.

Name: \_\_\_\_\_

Preschool where you received this survey: \_\_\_\_\_

Please indicate which drawing(s) you would like to included in.

\_\_\_\_ Children's book

\_\_\_\_ Autographed copy of "Teaching Kids to Love the Earth" by Dr. Joe Passineau

\_\_\_\_ Gift certificate to the Central Wisconsin Environmental Station

## Appendix E

Dear Teacher,

Thank you so much for agreeing to distribute these surveys to your parents. Each survey packet includes a letter to the parents, a Consent Form required by the University, the survey, and a prize drawing slip. There are some amazing prizes that the parents have the potential to win if they return the survey. This research is extremely important to me, and to the Central Wisconsin Environmental Station because of the potential information that can be gained from the parents. It might be really helpful if you could look over the survey and all the information included in the packet for the parents. That way if they come to you with questions about the survey or the research you will have a better understanding of what they are being asked. It might also help the return rate for my survey if you encourage the parents to participate and return the survey. I have also included a flyer about our upcoming public program Hoot N' Howl. This will be a wonderful program and may be of interest to your parents. I have also included a facility brochure for the Central Wisconsin Environmental Station, this may help in case your parents, or you have questions about the facility that the program is being developed for. Please share this brochure with any parents that you feel may be interested in seeing it. If there are parents who would like their own brochure let me know and I can certainly send you more. The brochure also has our website on it; parents should feel free to check out the facility there as well. Thank you for all of your help. I have also put some stickers in the packet for you to keep and enjoy with your students.

If there is anything else I can help you with, or if you have any questions at all please do not hesitate to call or email me.

Thanks.

Abbie Enlund  
715-544-0145  
Aenlu661@uwsp.edu

## Appendix F

Dear Preschool Parents,

You recently received a survey from your preschool teacher regarding family environmental education programs. This survey is a great opportunity for you as a parent to have some input into what types of programs are developed for your children. The information will be used by the Central Wisconsin Environmental Station to create a family program designed for preschool age children. If you have not already turned in the survey please take some time to fill it out and return it in the self addressed stamped envelope. There are some amazing prizes available to parents that return the survey. Thank you so much for your time.

Sincerely,

Abigail Enlund  
Graduate Assistant  
Central Wisconsin Environmental Station  
University of Wisconsin - Stevens Point  
715-544-0145

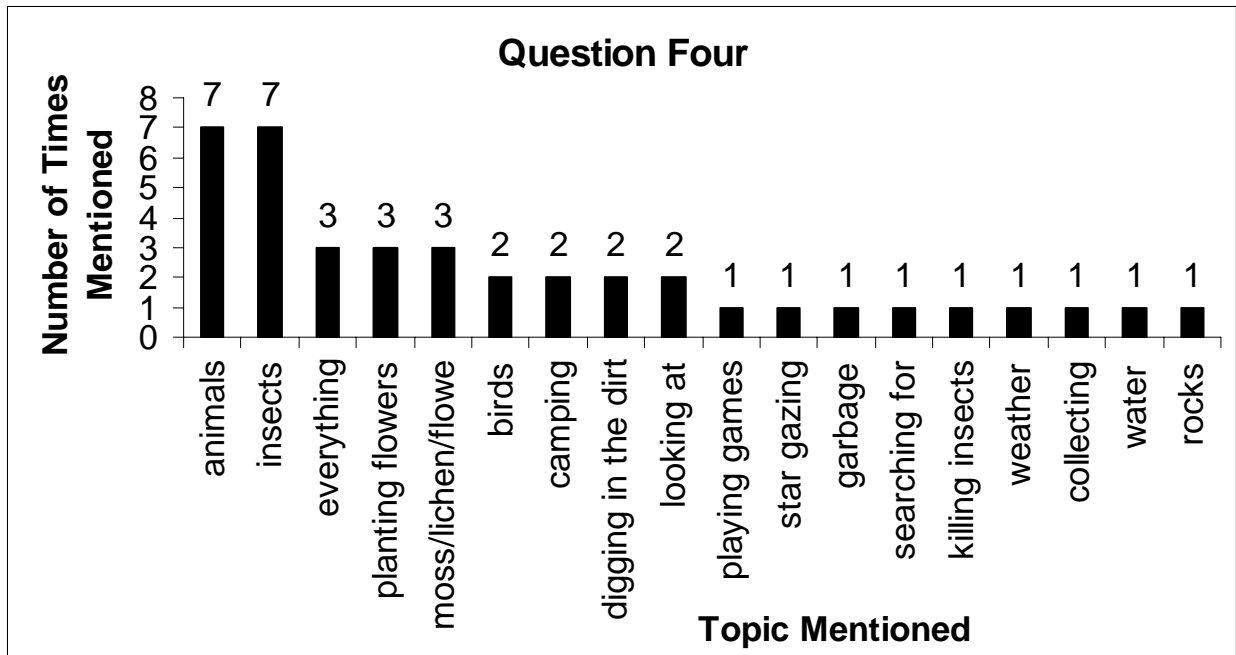
Appendix G

**Open-ended Survey to Parents Compiled Responses**

<b>Survey on Environmental Education Responses</b>			
<b>Question 1</b>		<b>Question 2</b>	
walks/hikes/walks in the woods	8	walk/hike	4
biking	7	looking for animal tracks	3
playgrounds/swinging	6	Biking	3
playing in the sand	6	Playground	2
catching insects	5	working in the yard	2
sports (summer)	5	Sports	2
looking for animals	4	snowshoeing	1
Water activities	3	spotting spring changes	1
digging	3	looking for birds	1
planting flowers	3	throwing rocks into water	1
swimming	3	Picnic	1
feed ducks	2	crayfish hunting	1
looking at flowers	2	picking up litter in the neighborhood	1
exploring	2	played in the sandbox	1
gathering/collecting sticks & rocks	2	Digging	1
sports (winter)	1	playing with water/watching it run	1
Climb trees	1	Tag	1
spraying water	1		
running	1		
having picnics	1		
playing games	1		
drawing with chalk	1		
climbing	1		

Appendix G Continued

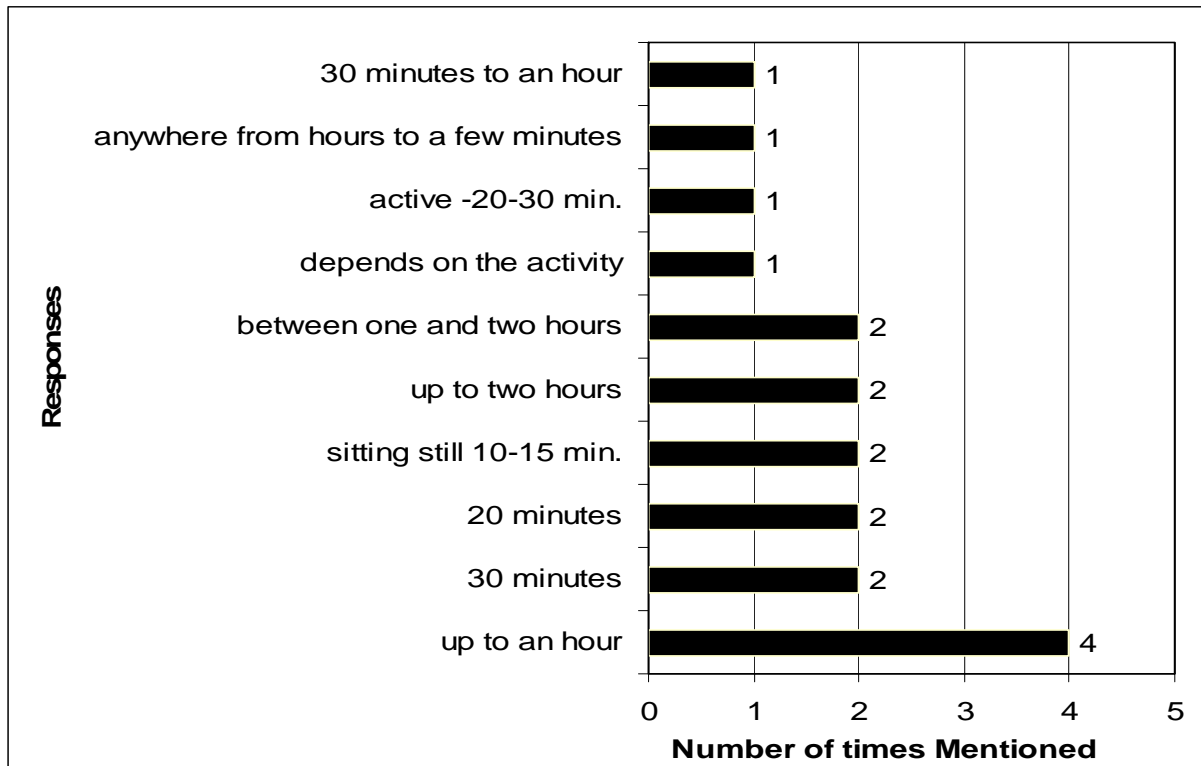
Question 3		Question 4	
all siblings with no non-family members	12	Animals	7
No	1	Insects	7
		Everything	3
		planting flowers	3
		moss/lichen/flowers/plants	3
		Birds	2
		camping experiences	2
		digging in the dirt	2
		looking at trees/nests	2
		playing games	1
		star gazing	1
		Garbage	1
		searching for animal tracks	1
		killing insects	1
		Weather	1
		Collecting	1
		Water	1
		Rocks	1



Appendix G Continued

Question 5		Question 6	
up to an hour	4	Library/books	10
30 minutes	2	Schmeeckle	4
20 minutes	2	professionals	2
sitting still 10-15 min.	2	Children's Museum	2
up to two hours	2	internet	2
between one and two hours	2	watching parents	2
depends on the activity	1	friends	1
Active -20-30 min.	1	Wildlife Rehab Center in BayBeach	1
anywhere from hours to a few minutes	1	Kid Conservation Day	1
30 minutes to an hour	1	Winter Candlelight walk	1
		hunting shows	1
		Nature Day Camps @ University of Wisc-Madison Arboretum	1
		County parks	1
		teaching materials	1
		Jordan Park Nature Center	1
		YMCA	1

Question Five Graph



Appendix G Continued

<b>Question 7</b>		<b>Question 8</b>	
hands-on activities	6	share interests	2
insects (how they grow, what they eat, what eats them)	2	help enhance what parent is trying to teach	2
nature walks	2	more mindful of the environment	2
supervised by professionals	1	great resource as a parent	2
earth worms	1	teach compassion	1
Stories	1	getting over phobias	1
something to bring home	1	family based experience	1
exploration of different habitats	1	meet other moms	1
nature based craft projects	1	learn child's interests	1
Coloring	1	the younger they learn the better	1
rocks/minerals	1	bring parent closer to the child	1
Ponds	1	child's interests broaden	1
respect for the environment	1	parent could learn from child	1
what pollution is and how we can help	1	learning would be at child's level, not that of adults	1
gardening (plant something, tend to it, and reap the benefits)	1		
play games	1		
look at objects under a microscope	1		
learn how things are connected, why they are important, and what they do	1		

<b>Question 9</b>
I think a program like that would be great, and I would be very interested in it.
We would really enjoy something like that.
How thrilling to teach children about the environment. We had a babysitter who is now a teacher in the field; the children loved her.
If we teach kids about it early on they will care about our Earth forever (recycling, etc.)
It would be nice to even have some classes like snowshoeing w/kids & perhaps info on how to do outdoors winter activities w/ young children. Nature history of WI - who walked & lived here before we were here. Thank you for considering this topic.
I think it's worthwhile - I've been a chaperone on a field trip to Boston School Forest in Stevens Point school district. I thought it was very worthwhile.
Only that the need is there for it, but unfortunately environmental issues are usually at the bottom of the totem pole as far as budgets and spending go. But it's important that we show our children how important the environment is, because the world is vastly different than the one we grew up in and will be when they get bigger.



Appendix H

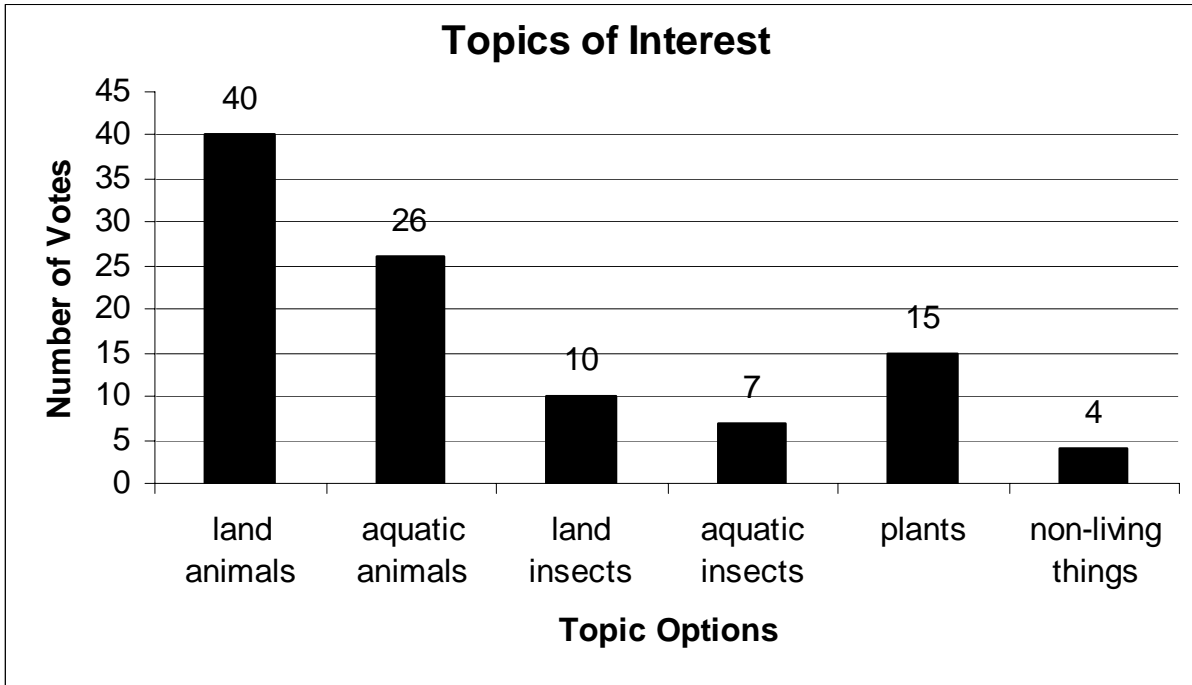
**Second Survey to Parents Responses Compiled**

<b>Second Survey on Environmental Education</b>									
Number of surveys included in total = 68									
<b>General Questions</b>									
1. Gender	Male	Female	Unknown						
	10	55	3						
2. Size of town	Over 50,000	40,000-49,999	30,000-39,999	20,000-29,999	10,000-19,999	Under 9,999	Unincorporated village	Rural area of farm	
	3	0	5	6	3	18	9	20	
3. # of children	one child	two children	three children	four children	more than four				
	10	39	14	3	2				

4. Child age frequencies (years)	Unborn	0
	6 months	0
	1	6
	1.5	6
	2	12
	2.5	3
	3	11
	3.5	4
	4	27
	4.5	2
	5	29
	6	9
	6.5	1
	7	11
	8	4
	9	5
	10	5
	11	3
	14	2
	21	1

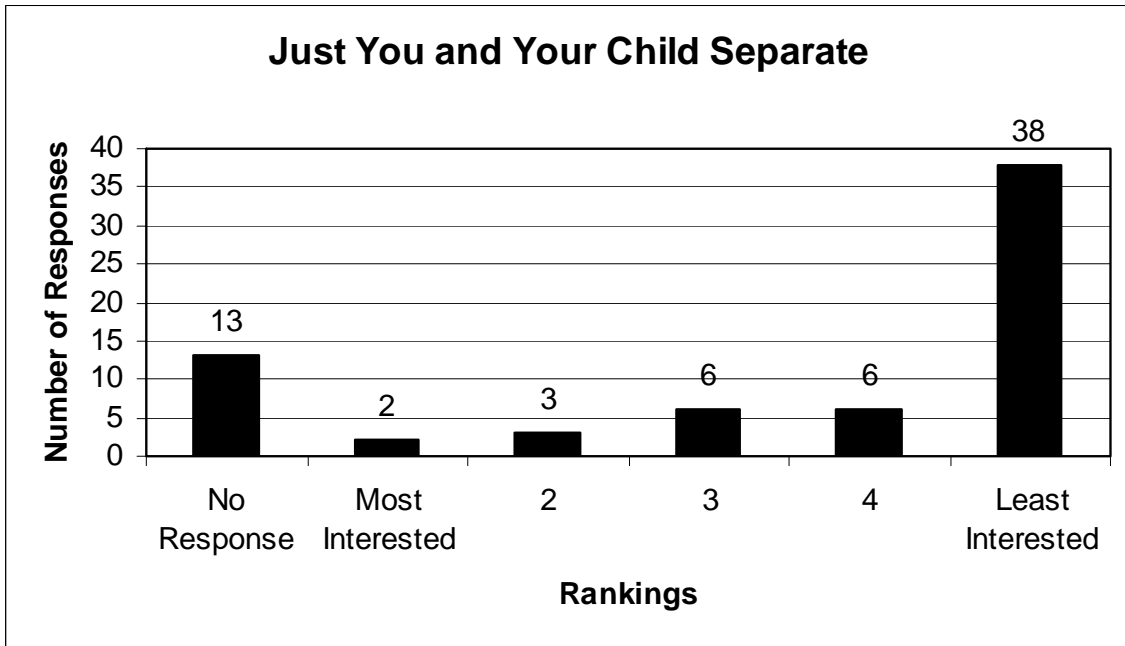
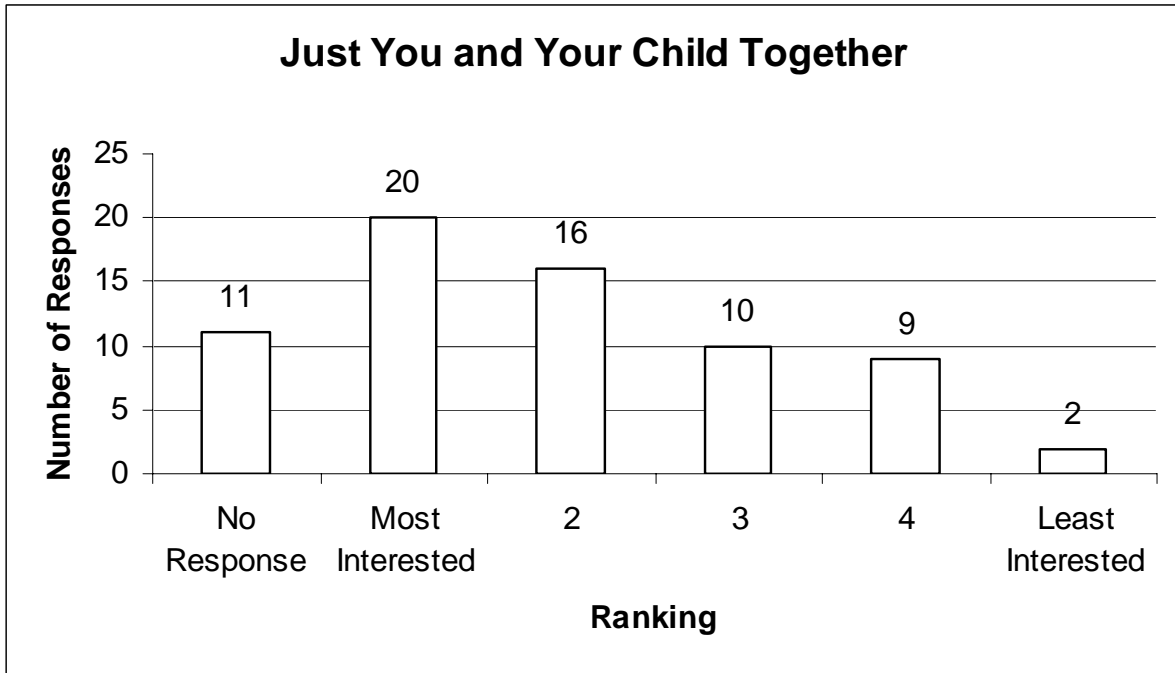
5. Type of school children attend	public	private, non-church affiliated	parochial	home-schooled			
	52	10	4	0			
6. Age of parent filling out survey	20 and under	21-25	26-30	31-35	36-40	41-45	46-50
	0	4	13	29	13	5	1
7. Ever attended function at CWES	yes	no					
	15	53					
8. Ever attended EE function	yes	no					
	19	49					
<b>Content Related Questions</b>							
9. Program design	Water	Forest					
	27	49					
10. Specific program design	land animals	aquatic animals	land insects	aquatic insects	plants	non-living topics	
	40	26	10	7	15	4	

Appendix H Continued

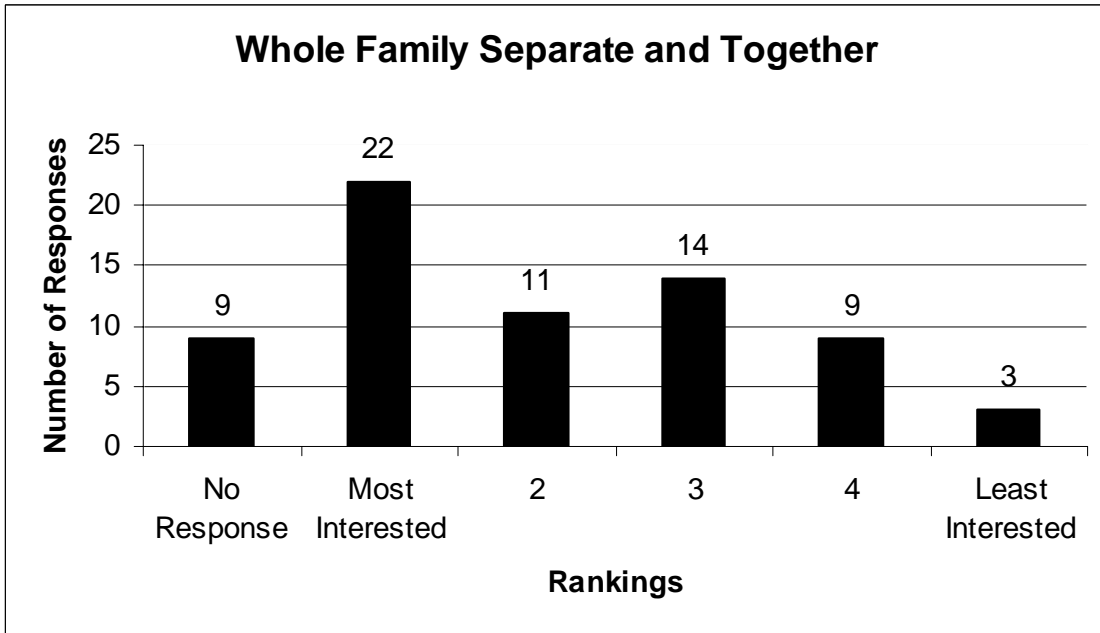
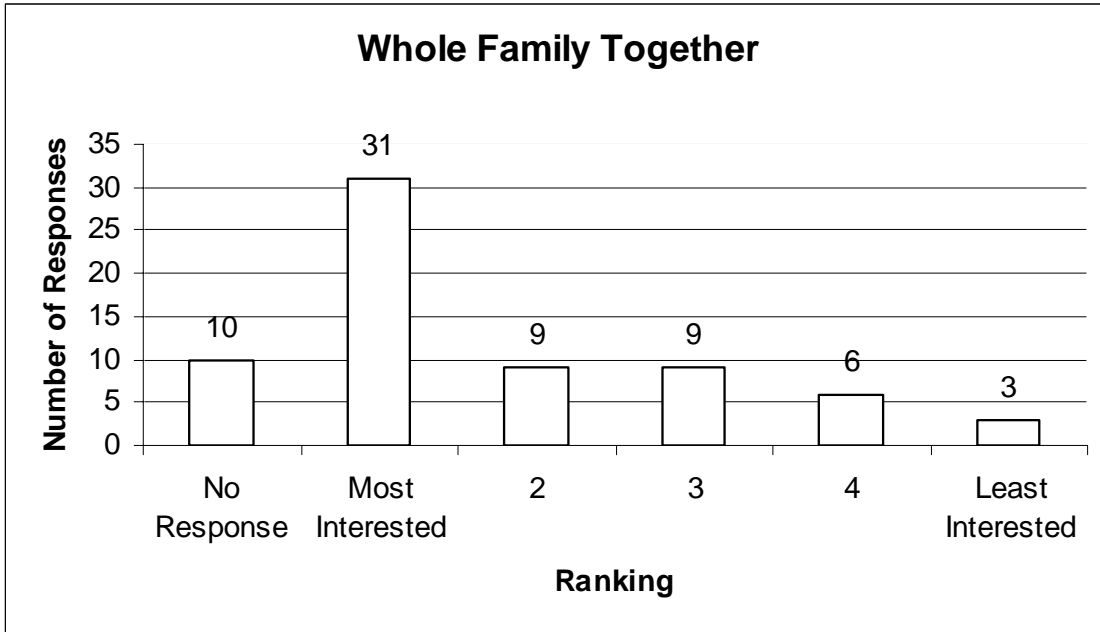


<b>Activity Related Questions</b>					
11. Program format	just for you & child together	just for you & child separate	whole family together	whole family separate activities	whole family separate and together
ranked one	20	2	31	22	5
ranked two	16	3	9	11	7
ranked three	10	6	9	14	10
ranked four	9	6	6	9	17
ranked five	2	38	3	3	16
no response	11	13	10	9	13

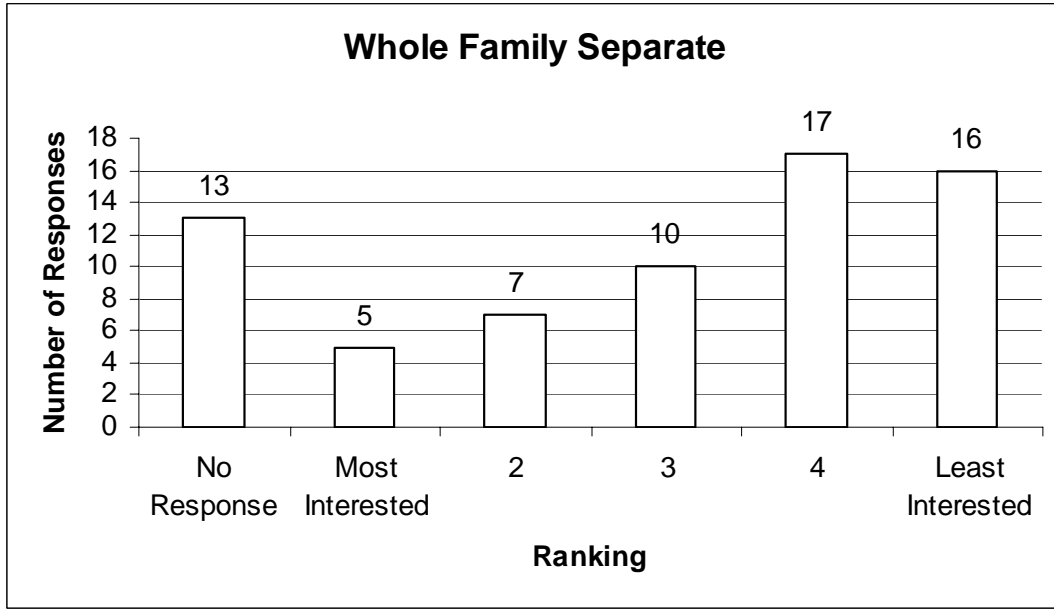
Appendix H Continued



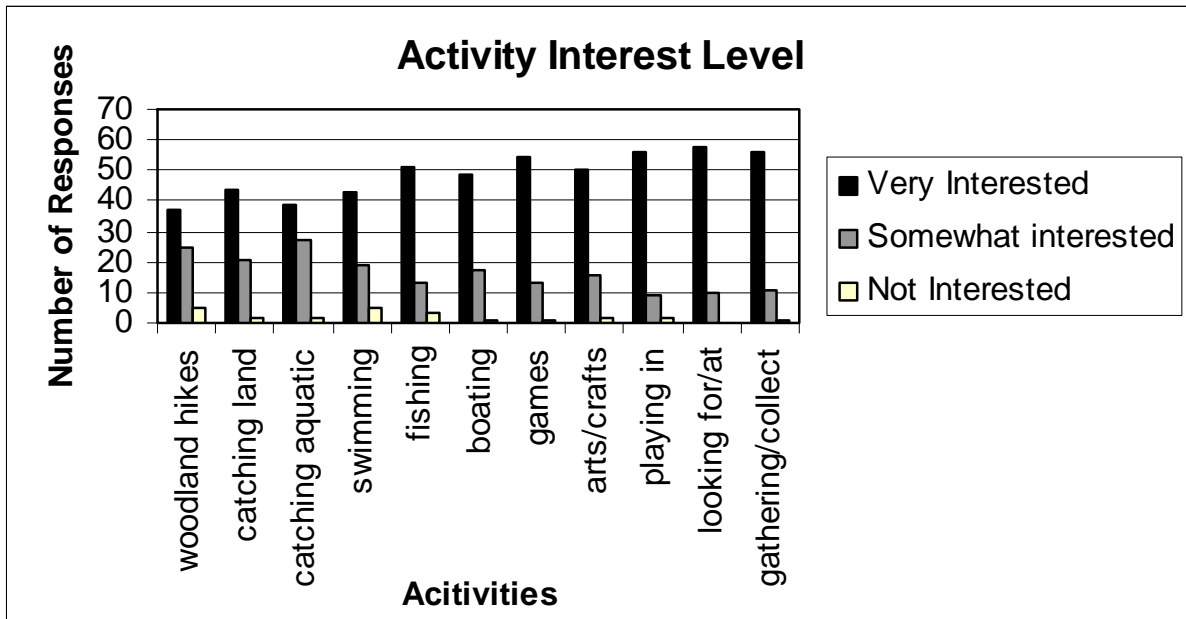
Appendix H Continued



Appendix H Continued

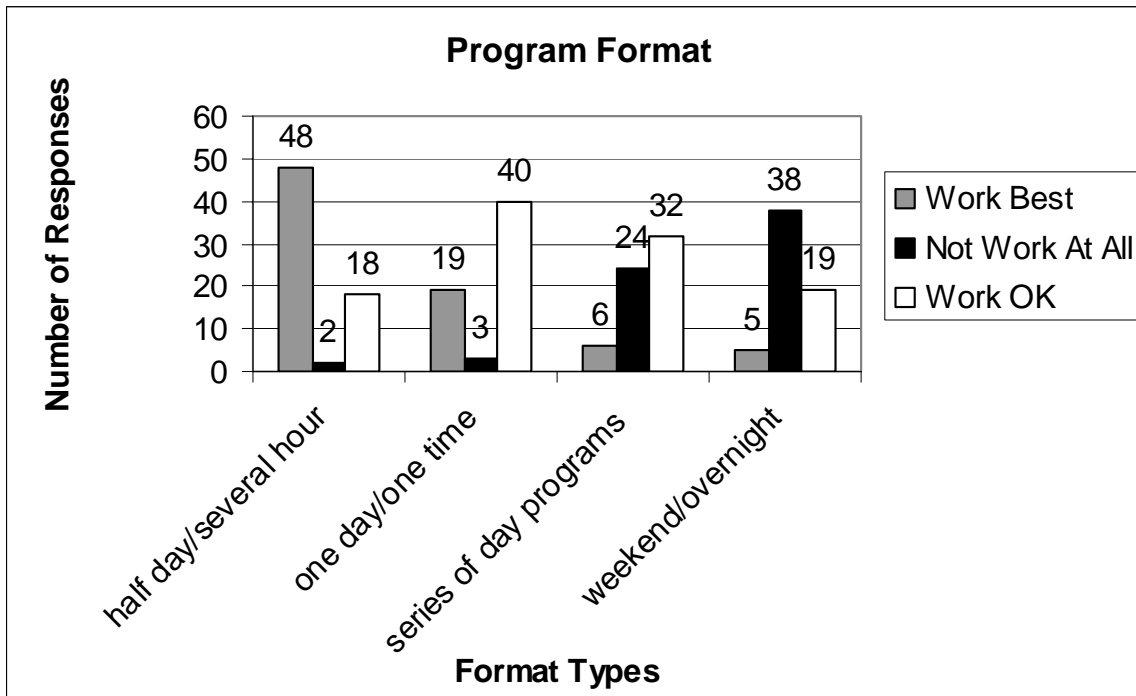


12. Interest in activities	hike	catch land insect	catch aquatic insect	swim	fish	boat	games	arts/crafts	play in sand/soil	Look for/at animal	gather/collect things
very interested	37	44	39	43	51	49	54	50	56	58	56
somewhat interested	25	21	27	19	13	17	13	16	9	10	11
not interested	5	2	2	5	3	1	1	2	2	0	1



Appendix H Continued

13. activity format	structured time frame	activity stations		
	27	41		
14. participation format	just with family	with other families		
	17	49		
<b>Time Related Questions</b>				
15. program format	half-day/several hour	one day/one time	series of day programs	weekend/overnight
Work best	48	19	6	5
Work ok	18	40	32	19
not work well	2	3	24	38



Appendix H Continued

16. Length of child interest in one activity	
20-30 minutes	17
1-2 hours	14
depends	8
30-45 min	6
Less than 20 minutes	4
30 minutes - 1 hour	3
over 2 hours	3
45-90 min	1
20-45 min	1
30 sec	1
"quite well"	1
half day	1
10-30 min	1
not sure	1
15 min - 1hr	1

17. best time of year	Jan.	Feb.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.
	23	29	29	27	31	42	35	35	23	22	15	8
18. time of week for program	during the week	during the weekend	during the week in the summer	during the weekend in the fall/spring								
	15	53	4	4								
19. Time of day	morning	afternoon										
	41	31										

Cost Related Questions								
20. Willing to pay	\$15 or less	\$15 or more	\$30 or less	\$30 or more	\$120 or less	\$120 or more	\$365 or less	\$365 or more
	49	18	42	17	11	2	13	3
21. Additional incentives	free t-shirt	access to buying materials	handouts	take home crafts	info about other places	other		
	28	26	25	53	22	1		



Appendix H Continued

<b>General Program Development Questions</b>							
22. Advertising source	newspaper	radio	TV	preschool newsletter	website	public bulletin board	other
	37	12	23	60	6	9	2

## Appendix I

### Discover the Wonder of the Woods Family Environmental Education Program

**Nutshell:** The preschool children and their parents will get the opportunity to explore the forest habitat. The children will learn about the forest habitat through the use of a children's book, animal simulation movement activity, forest hike, craft project, and a story writing activity.

**Program Time Frame:** 2 hours; 9:00 – 11:00 am

**Program Goals:**

The preschool children will learn more about forest ecosystems.

The preschool children will learn about certain forest animals, their daily lives, and how they move.

The preschool children and their parents will gain a closer look at a habitat that may be right by their homes.

**Program Objectives:**

**Cognitive Objectives:**

After completing the program the preschool children will be able to name three animals that live in a forest. (knowledge)

Upon completion of a hike the preschool participants will be able to describe two or three characteristics of a forest. (knowledge)

**Affective Objectives:**

After completing the story book portion of the program the preschool participants will be able to list three aspects of a day in the life of forest animals. (responding)

**Psychomotor Objective:**

The preschool participants will be able to demonstrate how one forest animal moves, and how that movement is different from the way they move. (guided response)

**Procedure:**

During arrival and check-in –

As parents are arriving and checking in there will be stations set-up of different activities that the parents can do with their children as they wait for everyone to arrive. Each station will have a simple instruction card with it so the parents know exactly what to do at each station. The stations are listed below.

Station One – Five items that can be found in the forest will be placed in individual cloth bags. The children and parents will be instructed to place their hand inside each bag one at a time and using just their hand try to figure out what the items are.

Station Two – A picture of a forest, and some of the animals that can be found in the forest, will be placed on a table with crayons and markers. The children and parents will be able to color in the picture.

Station Three – Fur pelts, bones and other parts of forest animals will be placed on a table with cards identifying which animal each item goes to. The children and parents will have the opportunity to examine and touch each of the items.

Station Four – A collection of rubber stamps that are pictures of animal tracks and paper will be placed on the table. The parents and children will be able to create tracks of different animals and compare the way different animal's feet look.

#### Activity One – Story Time (25 minutes)

After all of the parents have arrived the parents and children will be welcomed to CWES, introduced to the staff, and given a brief description of what they will be doing during the program. The group will then be instructed to sit in a small circle so the story time portion of the program can begin. The story "Lost in the Woods" will be read and then the children will be asked questions about what happened in the book, what they learned from the book, and what they liked most from the book. The group will talk about each of the animals from the book and learn just a little bit about what each of the animal's eats, and where they live.

#### Activity Two – Animal Movement Simulation Activity (20 minutes)

After the children and parents have learned some of the animals that live in the forest they will get to participate in an activity where they will learn how some forest animals move through the forest. Each family will chose a different animal and try and imitate how that animal might move. A game of follow the leader will then occur where the children and parents will all line-up and imitate animal's movement as they travel along a trail. Each child or parent will get to take a turn being in the front of the line and deciding which animal everyone should move like.

#### Activity Three – Forest Hike (30 minutes)

Before the hike begins the parents and children will be given an opportunity to use the restroom, or get a drink. Each child will then be given a bag that they can use along the hike to collect small items they find in the forest. The families will be told to gather small things that the children like; the items have to be non-living, and small enough that they can fit into the bag. The families will also each be given a bug-box and a magnifying glass so that they can look at small items that they find.

As the group is on the hike stops will be made to point out animal homes, tracks, or other signs that animals have been there. The parents and children will be given the opportunity to go off the trail at different points to explore the forest. The hike will lead the families through the forest at the CWES.

#### Activity Four – Forest Collage (20 minutes)

The items that the children and their parents collected will be used to make a forest collage. Each family will be given a large tree cookie (thin slice of a tree) that they can glue the different things they collected on to. Hot glue guns will be used to glue the items to the tree cookies, so the parents will need to do the gluing.

Activity Five – Animal Matching Activity (25 minutes)

The children will try to match different forest animals to their home, and food source. The activity will begin by having the children look at five pictures of forest animals and identifying what the animals are. Next the children will be shown five pictures of the animal's homes and asked to match the animals with their home. The children will be asked to raise their hands if they can match any of the homes to the animal pictures in front of them. Once a picture of a home has been correctly matched it is placed next to the correct animal. The same procedure is then done with the pictures of the animal homes and the examples of the animal's food. A grading rubric will be used either during the program or immediately following the program to determine how well the students did on the activity and how much knowledge was gained through the program

End of Program –

After stories and pictures have been shared the families will be thanked for coming to the program, and given the opportunity to visit the Trading Post.

Dear Validity Panel,

Thank you so much for agreeing to help me out with the evaluation of my family program. Here is the packet of materials that you will need. I have included first the instructions of exactly what I am asking you to do for each of the tools. Next you will find versions of three of the tools that have bold faced text within them. This bold faced text is explaining in more detail what each of the sections or individual questions is trying to achieve. I have not stapled these together so that you may pull them out and look at them while you are examining the actual tools. Each of the four different evaluation tools are also included in the packet. I have also included the description of the family program so that you will be able to get a clear understanding of what these tools will actually be evaluating. The family program is set to run on March 17<sup>th</sup>, so if you have major problems or concerns with the tools please contact me as soon as possible through email ([aenlu661@uwsp.edu](mailto:aenlu661@uwsp.edu)) and let me know. I appreciate any advice or guidance that you can give me as this is my first time to do thorough program evaluation.

Thank you so much for your time.

Sincerely,

## Appendix J1

### Validity Panel Evaluation Packet

#### **Instructions for Evaluation of Tools**

Thank you very much for agreeing to examine the tools that will be used to evaluate my family environmental education program. These tools were originally developed as part of a Natural Resources course, Applied Environmental Education Evaluation. You are being asked to evaluate four different evaluation tools, an alternative assessment, observation tool, post-program interview, and post-program survey. Any comments or questions that you have please include directly on the individual tools.

For each tool please examine...

- the purpose of each tool and check to make sure that the evaluation tool will ultimately accomplish the purpose for which it was developed.
- the description of what each section/item in the tool is trying to achieve to see if the section/item will accomplish it's goal.
- the readability of each tool to make sure that the wording is easy to read, and understand.

#### Observation Tool

Please review the observation tool to ensure that all information that may be helpful to determine the successfulness\* of the program is being gathered. The observation tool should also be easy to follow and complete for the observer. A detailed explanation of the different sections is included to clarify the purpose of those parts.

#### Alternative Assessment Tool

Please review the alternative assessment tool to ensure that the activity will evaluate the students knowledge gained, and is developmentally appropriate.

#### Post-program Interview

Please review each of the questions to see how the questions might be interpreted and if any wording should be changed for clarification purposes. A detailed explanation of each of the questions and what information is hoped to be gained from each question is included.

#### Post-program Survey

Please review the post-program survey to see if any other questions regarding participant long-term change in participant interest level or intention to participate in other programs need to be asked. A detailed explanation of each of the questions and what information is hoped to be gained from each question is included.

\* For the purpose of this project a successful program is being defined as “an event that is financially sound, is replicable, accomplishes the objectives specified for it and results in a high rate of attendance, enjoyment, information gained, intention to participate in additional events, and ability to change attitudes”.

Appendix J1 Continued  
Observation Tool

Family Environmental Education Program  
At the Central Wisconsin Environmental Station

Explanation of each section of the Observation Form  
Throughout the observation form the explanation of different sections and/or questions are included in bold text.

**General Information** – complete this section before program begins.

Observers Name: \_\_\_\_\_ Date/Time: \_\_\_\_\_

\_\_\_\_\_

Program being observed:

\_\_\_\_\_

Weather:

\_\_\_\_\_

Number of participants: \_\_\_\_\_ Number of volunteers: \_\_\_\_\_

Number of parents: \_\_\_\_\_ Number of children ages 3-5: \_\_\_\_\_

Number of older (6 and older) children: \_\_\_\_\_

Total number of family groups: \_\_\_\_\_

List the objectives for the program here. (Number them 1, 2, 3, ...etc)

**The “General Information” section is attempting to provide of the demographic and background information to describe the program, setting and participants.**

**Activity 1 Story Time** Start time: \_\_\_\_\_ End time: \_\_\_\_\_

For every 5 minutes indicate how many participants of the three families being observed, seemed engaged/interested in the activity.

Time	# of children engaged	# of parents engaged

What led you to believe they were not engaged/interested in the activity anymore?

**The chart and question above are trying to determine if the length of time for the activity was too short, too long, or just right for the age level of the participants.**

Appendix J1 Continued

For each category and time below circle the appropriate choice for the person/people being observed.

5 minutes into activity	10 minutes	15 minutes	20 minutes
<b>Children:</b> Eyes on the instructor 0% 25% 50% 75% 100%	<b>Children:</b> Eyes on the instructor 0% 25% 50% 75% 100%	<b>Children:</b> Eyes on the instructor 0% 25% 50% 75% 100%	<b>Children:</b> Eyes on the instructor 0% 25% 50% 75% 100%
Talking with parents/adults 0% 25% 50% 75% 100%	Talking with parents/adults 0% 25% 50% 75% 100%	Talking with parents/adults 0% 25% 50% 75% 100%	Talking with parents/adults 0% 25% 50% 75% 100%
Talking with other children 0% 25% 50% 75% 100%	Talking with other children 0% 25% 50% 75% 100%	Talking with other children 0% 25% 50% 75% 100%	Talking with other children 0% 25% 50% 75% 100%
Raising hands to answer/ask questions 0% 25% 50% 75% 100%	Raising hands to answer/ask questions 0% 25% 50% 75% 100%	Raising hands to answer/ask questions 0% 25% 50% 75% 100%	Raising hands to answer/ask questions 0% 25% 50% 75% 100%
Doing the activity 0% 25% 50% 75% 100%	Doing the activity 0% 25% 50% 75% 100%	Doing the activity 0% 25% 50% 75% 100%	Doing the activity 0% 25% 50% 75% 100%
Other:	Other:	Other:	Other:
<b>Parents:</b> Eyes on the instructor 0% 25% 50% 75% 100%	<b>Parents:</b> Eyes on the instructor 0% 25% 50% 75% 100%	<b>Parents:</b> Eyes on the instructor 0% 25% 50% 75% 100%	<b>Parents:</b> Eyes on the instructor 0% 25% 50% 75% 100%
Talking with child(ren) 0% 25% 50% 75% 100%	Talking with child(ren) 0% 25% 50% 75% 100%	Talking with child(ren) 0% 25% 50% 75% 100%	Talking with child(ren) 0% 25% 50% 75% 100%
Talking with other adults 0% 25% 50% 75% 100%	Talking with other adults 0% 25% 50% 75% 100%	Talking with other adults 0% 25% 50% 75% 100%	Talking with other adults 0% 25% 50% 75% 100%
Raising hands to answer/ask questions 0% 25% 50% 75% 100%	Raising hands to answer/ask questions 0% 25% 50% 75% 100%	Raising hands to answer/ask questions 0% 25% 50% 75% 100%	Raising hands to answer/ask questions 0% 25% 50% 75% 100%
Doing the activity 0% 25% 50% 75% 100%	Doing the activity 0% 25% 50% 75% 100%	Doing the activity 0% 25% 50% 75% 100%	Doing the activity 0% 25% 50% 75% 100%
Other:	Other:	Other:	Other:

The chart above and the two questions below are trying to determine the overall enjoyment and involvement of the participants in the activity.



## Appendix J1 Continued

How much do you feel the children enjoyed this activity? For each level circle the percentage of children you felt were at that level.

REALLY ENJOYED	0%	25%	50%	75%	100%
ENJOYED	0%	25%	50%	75%	100%
SOMEWHAT ENJOYED	0%	25%	50%	75%	100%
ENJOYED VERY LITTLE	0%	25%	50%	75%	100%

How much do you feel the parents enjoyed this activity? For each level circle the percentage of parents you felt were at that level.

REALLY ENJOYED	0%	25%	50%	75%	100%
ENJOYED	0%	25%	50%	75%	100%
SOMEWHAT ENJOYED	0%	25%	50%	75%	100%
ENJOYED VERY LITTLE	0%	25%	50%	75%	100%

Was this activity a good fit for preschoolers and their parents? Why or why not?

**This question is trying to see if the observers notice anything about the activity that was especially age appropriate or different for the preschool students than the way activities are typically formatted with older students.**

General thoughts, suggestions, observation from activity one.

**\*The questions and goals of the questions are the same for activity two, three and four as they are for activity one.**

### **General Information Post Program**

1. Indicate with an "x" which of the objectives listed below you witnessed being accomplished during this program.
  - After completing the program the preschool children will be able to name three animals that live in a forest. (knowledge)
  - Upon completion of a hike the preschool participants will be able to describe two or three characteristics of a forest. (knowledge)
  - After completing the story book portion of the program the preschool participants will be able to list three aspects of a day in the life of forest animals. (responding)
  - The preschool participants will be able to demonstrate how one forest animal moves, and how that movement is different from the way they move. (guided response)

Appendix J1 Continued

**This question will help to determine if the objectives of the program were met, which will help to establish whether or not the program was successful.**

2. For each of the objectives listed please indicate for what percentage of the audience each objective was developmentally appropriate (0%, 25%, 50%, 75%, or 100%).

- After completing the program the preschool children will be able to name three animals that live in a forest. 0%, 25%, 50%, 75%, or 100%
- Upon completion of a hike the preschool participants will be able to describe two or three characteristics of a forest. 0%, 25%, 50%, 75%, or 100%
- After completing the story book portion of the program the preschool participants will be able to list three aspects of a day in the life of forest animals. 0%, 25%, 50%, 75%, or 100%
- The preschool participants will be able to demonstrate how one forest animal moves, and how that movement is different from the way they move. 0%, 25%, 50%, 75%, or 100%

**Because there will be other children that are not of preschool age this question is trying to figure out if the objectives were a good fit for the group overall and not just the preschool children.**

3. For the objectives where the developmentally appropriate percentage was lower than 50% are there any suggestions or changes that should be considered to increase the appropriateness of the program?

**From this question information regarding possible changes to the objectives based on the inclusion of older siblings will hopefully be gathered, if necessary.**

4. Circle the activity or portion of the program for which the time frame should be changed, if you feel the time frame should be changed.

Introduction                      Activity 1                      Activity 2                      Activity 3  
Activity 4

5. What would be the optimal length of time for one activity for this particular audience? \_\_\_\_\_

**These two questions are attempting to gather suggestions about the length of time for each activity and what changes should be made for future programs.**

6. Any additional recommendations for improvement based on this observation?

Appendix J1 Continued

Post-Program Interview

Family Environmental Education Program

At the Central Wisconsin Environmental Station

Explanation of each question on the Post Program Interview Form  
The explanation for each of the questions is included within the interview in bold text.

Interviewer's Name: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Interviewee's Identification number: \_\_\_\_\_

Interview location: \_\_\_\_\_

Introductory statement to be read, or paraphrased to the interviewee:

Thank you for agreeing to do this interview. The answers you give from this interview will help the staff at the Central Wisconsin Environmental Station to improve their family programs. It may also help with the possible development of future family programs. The information could also help many other nature centers with improving their family programs. Your name is not being recorded and none of your personal information will be used in this study. Not using your name gives you the ability to answer honestly to all of the questions. There are no wrong answers to the questions in this interview. Any information you give will be helpful. The interview should only last fifteen to twenty minutes. Again, we would like to thank you for your help with this interview about family programs.

Is it okay if this interview is recorded?      YES   or   NO

Interview Questions:

Question one:      Who did you bring to the family program? (age, sex, number of child/children)

**This question is trying to describe the population of the program, and help to allow the interviewer/evaluator to understand the interviewees responses by knowing what age(s) the child(ren) were that came with the parent.**

Question two:      How interested was/were your child(ren) in learning about forests prior to attending this program?

**This question should reveal whether or not the child(ren) has prior interest in the topic of forests.**

Question three:      What about forest animals was of interest to your child(ren)?

**This question should gather information about what the child(ren) and/or parents were hoping to learn from the program regarding forest animals based on what they were interested in.**

Question four:      How interested/engaged was/were your child in the animal movement activity?

Appendix J1 Continued

**This question will hopefully provide information about how interested the parent's feel the children were in this activity that can then be compared to what the observer saw during the program.**

Question five: Which activities did you and your child(ren) enjoy?

Probe: Tell me more about what you did during the activities.

**From this question information about which activity was the children's favorite is hoped to be gained.**

Question six: What did you learn about forests and forest animals from the program?

**Information about knowledge gained by the parents will be gathered from this question.**

Question seven: In what way do you think your child's attitudes about forests may have changed after coming to this program?

**This question is trying to find out what the parents may believe will be changed about their child after having attended the program (i.e. will the child want to explore forests more, learn more about the forest or forest animals, spend more time outside, etc).**

Question eight: How well did the forest hike allow your child to explore the forest habitat?

**Direct contact with natural resources is most important at the early education level and this question will hopefully gather information on how well this activity allowed the preschool children to do that.**

Question nine: What changes do you feel could be made to the forest hike to increase the level of exploration for the children?

**This question is seeking suggestions from the parents on how to make the activity easier and more interactive for the families.**

Questions ten: Do you foresee, as a result of this program, that you will take your child into the woods more often than you did before?

**This question is hoping to get a prediction from the parents as to whether or not they feel they will increase the amount they spend in the forests after the program.**

Questions eleven: What resources would you find useful to continue exploring nature with your child?

**This question will hopefully lead to suggestions on what parents would like to see made available by environmental educators to get families more involved in learning about the environment.**

Question twelve: Around what other topics, or habitats, would you be interested in seeing a family program developed?

**Suggestions on other topics that could be used to create other family programs is hoped to be gathered from this question.**

Question thirteen: Where else would you be interested in seeing these types of family programs offered?

**This question is trying to determine if there are other places, possible closer to the families homes, where they would be interested in seeing family programs offered.**

## Appendix J1 Continued

Question fourteen: What other thoughts do you have about family programs?

**This question will give the parents the opportunity to add any other thoughts they might have regarding family programs in general.**

Questions fifteen: Is there anything else you would like to add or clarify about the program that you just went to?

**This question will give the parents the opportunity to add any other thoughts they might have regarding the family program that they just attended.**

### Interviewer Reminders:

At the end of the interview go back and summarize the main points made by the interviewee (see script below).

Thank the interviewee for their time and their help with the interview and the overall research project.

Script for interviewer – “Thank you so much for your time this morning. I want to recap the main points that you made during this interview to be sure that I have everything recorded accurately. You came to this program today with \_\_\_\_\_. Your child(ren) had \_\_\_\_\_ amount of interest in forests prior to attending the program. With regards to forest animals your child(ren) had interest in \_\_\_\_\_. The animal movement activity was \_\_\_\_\_ interesting to your child(ren). The activities that you and your family enjoyed the most were \_\_\_\_\_. You stated that you learned \_\_\_\_\_ about forests and forest animals. You believe your child(ren) attitudes about forests \_\_\_\_\_. The forest hike \_\_\_\_\_ allowed your child(ren) to explore the forest and you described \_\_\_\_\_ changes that could be made. With regards to whether or not you feel you will take your child into the woods more often after attending this program you said \_\_\_\_\_. You mentioned \_\_\_\_\_ as resources you feel are useful as a parent. \_\_\_\_\_ are other topics you would be interested in seeing a program developed around. You mentioned these other facilities \_\_\_\_\_ as places that you would like to see develop family programs. Is there anything that I missed, or misrepresented?”

## Post-Program Survey

### Family Environmental Education Program

At the Central Wisconsin Environmental Station

#### Explanation of questions for the Post-Program Survey

The explanation of each of the questions on the survey is included below in bold text.

Please take a few minutes to fill out this survey about the family program that you recently attended at the Central Wisconsin Environmental Station. The information that

Appendix J1 Continued

you provide us will help us to improve the program for the future. You can mail the survey back to the Central Wisconsin Environmental Station (CWES) in the envelope that has been provided.

Thank you for your time.

Please circle your level of agreement with the following statements. The scale is as follows; SD – strongly disagree, D – disagree, N – neither agree nor disagree, A – agree, SA – strongly agree.

1. My child and I enjoyed the program  
that we attended at CWES. SD D N A SA

**This question is trying to determine how many and how much the families enjoyed the program.**

2. My child and I have discussed what we did and  
learned since the program we  
attended at CWES. SD D N A SA

**Whether or not the program had a longer lasting impression or impact on the family is trying to be determined in part with this question.**

3. My child's interest in forests has increased since the  
program we attended at CWES. SD D N A SA

**This question is trying to measure how many children and how much the interest level of the children that attended the program has increased with regards to forests.**

4. My child's interest in forest animals has increased  
since the program we attended at CWES. SD D N A SA

**This question is trying to measure how many children and how much the interest level of the children that attended the program has increased with regards to forest animals.**

5. My child's interest in animals in general and where  
they live has increased. SD D N A SA

**This question is trying to measure how many children and how much the interest level of the children that attended the program has increased with regards to animals in general. The above three questions in combination will try to establish overall interest level increases of the children trying to establish ultimately if the program was successful in increasing knowledge and changing attitudes.**

6. My child and I have spent time exploring forests  
since we attended the program at CWES. SD D N A SA

**This question is trying to determine if the behaviors of the families with regards to time spent in forests or outdoors changed at all due to the program.**

Additional comments on how your child's interests have changed.

Appendix J1 Continued

Now that you have experienced a family environmental education program,

7. How much would you be willing to pay for a family program? (Mark all that apply.)

- \$15 or less for a half day including programming.
- \$15 or more for a half day including programming.
- \$30 or less for a one day including programming, snack & lunch.
- \$30 or more for a one day including programming, snack & lunch.
- \$120 or less for a series of programs, 5 days, 2 hours each day, including programming
- \$120 or more for a series of programs, 5 days, 2 hours each day, including programming
- \$365 or less for a weekend including all programming, food and lodging
- \$365 or more for a weekend including all programming, food and lodging

**This question is attempting to find out what the parents are willing to pay for now that they have been to a family program. This question was taken directly from the large survey that went out to families that helped to develop the program.**

8. Do you have plans to attend another family program at CWES or at another location? YES or NO If no, what would encourage you to attend other family programs?

**This question is trying to determine if after attending one program the families are interested in attending more programs. The responses to this question will also help to determine is more family programs should be offered.**

9. If a program were designed around one of these topics which would you be most likely to attend? (Please rank your interest level in these topics 1 through 6; 1 – most interest to 6- least interested.)

- Land animals
- Aquatic animals
- Land insects
- Aquatic insects
- Plants
- Non-living topics; rocks, minerals, soil
- other, please describe.

**This question is trying to determine if there are other topics that these parents are interested in seeing family programs designed around.**

This last question is a way for CWES to build on what is already going on and fill in the gaps for what is missing in the area of family environmental education programs.

10. Are there other programs at other nature centers that you plan on attending, or know about? YES or NO

If yes, please state what center, and which program.

**This question is trying to determine if the parents are seeking out family programs at other centers, or if other centers are offering something along the same lines as what was offered at CWES.**



# Discover the Wonder of the Woods!

## At the Central Wisconsin Environmental Station

**WHAT:** A Family Environmental Education Program

The children’s book “**Lost in the Woods**” by Carl Sams and Jean Stoick will be used along with a forest exploration hike, animal movement activity and forest collage activity to introduce children to the exciting world of forests and the animals that live there.

**WHO:** Designed specifically for **preschool aged children (4-5 yrs old)**, their parents and siblings

**WHERE:** Central Wisconsin Environmental Station, Amherst Junction, WI

**WHEN:** March 17<sup>th</sup>, 9:00am to 11:00am

Space is limited and pre-registration with payment is required prior to attending the program, so sign-up today by filling out, detaching, and sending in the form below.

-----  
**Please call 715-824-2428, and ask for Abbie to check on space prior to registering.**

Parent Name(s): \_\_\_\_\_

Child Name and age: \_\_\_\_\_ Child Name and age: \_\_\_\_\_

Child Name and age: \_\_\_\_\_ Child Name and age: \_\_\_\_\_

Email address (if you would like to be contacted about other programs):  
\_\_\_\_\_

\$12 is enclosed for my preschool aged child and one parent to attend

Please enclose an additional \$2 for every additional adult or child family member that will be attending the program.

Number of children attending (if more than one) \_\_\_\_\_

Number of adults attending (if more than one) \_\_\_\_\_

Total amount enclosed (if more than \$12) \_\_\_\_\_

I am willing to participate in a post-program evaluation interview for a \$2 refund given after the interview.

Mail registration and fee to: Central Wisconsin Environmental Station  
Attn: Abbie Enlund  
10186 County Rd MM, Amherst Junction, WI 54407





# Media Advisory

University of Wisconsin-Stevens Point

University Relations and Communications  
Stevens Point WI 54481-3897  
715-346-3046; Fax 715-346-2042  
E-mail: news@uwsp.edu • www.uwsp.edu/news

March 9, 2007

**MEDIA ADVISORY:** *CWES pre-school forest exploration program*

- Who:** University of Wisconsin-Stevens Point  
Central Wisconsin Environmental Station (CWES)  
Amherst Junction
- What:** The CWES Discover the Wonder of the Woods program is a family environmental education program that gets kids and their parents into the woods. CWES staff will utilize the children's book, "Lost in the Woods" by Carl R. Sams II and Jean Stoick, for their forest exploration hike, animal movement activity and an art project.
- Where:** CWES  
Amherst Junction
- When:** Saturday  
March 17  
9 a.m. – 11 a.m.
- Registration:** Families are asked to please register by March 9.
- Cost:** \$12 for one preschool aged child and one parent (\$2 for each additional parent or sibling)
- Contact:** Central Wisconsin Environmental Station (715) 824-2428  
\*ask for Abbie Enlund

# **Discover the Wonder of the Woods!** At the Central Wisconsin Environmental Station

**WHAT:** A Family Environmental Education Program

The children's book "**Lost in the Woods**" by Carl Sams and Jean Stoick will be used along with a forest exploration hike, animal movement activity and forest collage activity to introduce children to the exciting world of forests and the animals that live there.

**WHO:** Designed specifically for **preschool aged children (4-5 yrs old)**, their parents and siblings

**WHERE:** Central Wisconsin Environmental Station, Amherst Junction, WI

**WHEN:** March 17<sup>th</sup>, 9:00am to 11:00am  
**Registration deadline EXTENDED! CALL NOW!**

**Cost:** \$12 for one preschool child and parent to attend; \$2 extra for each additional family member.

For more information call 715-824-2428 and ask for Abbie Enlund.  
**Space is limited, so call and get registered soon!**

## Appendix N

### Family Environmental Education Program At the Central Wisconsin Environmental Station

#### Observation Form – Second Draft

##### **Purpose:**

The purpose of this observation form is to evaluate the instructor, and implementation of the environmental education family program. This observation form will help to decide, by judging the interest and enjoyment level of the participants, whether or not this program was successful. The evaluation will help to improve the program for future implementations.

##### **Procedures for the Evaluation Form:**

This observation form would be completed by a CWES volunteer while the family environmental education program was being taught. The families will be aware of the observer, so he/she will be an overt observer, but will not be aware of exactly what is being observed. The instructor and participants of the program will be the main focus of the observation. Three families will be chosen at random at the beginning of the program; before the instructor has begun the first activity. The observer will stay with the program, going wherever on CWES site that the program takes the participants. The observer will fill out the form just based on the actions, and behaviors of the three families chosen at the beginning of the program. The observer will need the observation form, pen or pencil, clipboard, and stop watch.

Appendix N Continued  
Family Environmental Education Program  
 At the Central Wisconsin Environmental Station

Observation Form – Second Draft

**General Information** – complete this section before program begins.

Observers Name: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Program being observed:  
 \_\_\_\_\_

Weather:  
 \_\_\_\_\_

Number of participants: \_\_\_\_\_ Number of volunteers: \_\_\_\_\_

Number of parents: \_\_\_\_\_ Number of children ages 3-5: \_\_\_\_\_

Number of older (6 and older) children: \_\_\_\_\_

Total number of family groups: \_\_\_\_\_

List the objectives for the program here. (Number them 1, 2, 3, ...etc)

**Activity 1 Story Time**

Start time: \_\_\_\_\_ End time: \_\_\_\_\_

For every 5 minutes indicate how many participants of the three families being observed, seemed engaged/interested in the activity.

Time	# of children engaged	# of parents engaged

What led you to believe they were not engaged/interested in the activity anymore?

Appendix N Continued

For each category and time below circle the appropriate choice for the three families being observed.

5 minutes into activity	10 minutes	15 minutes	20 minutes
<b>Children:</b> Eyes on the instructor 0% 25% 50% 75% 100%	<b>Children:</b> Eyes on the instructor 0% 25% 50% 75% 100%	<b>Children:</b> Eyes on the instructor 0% 25% 50% 75% 100%	<b>Children:</b> Eyes on the instructor 0% 25% 50% 75% 100%
Talking with parents/adults 0% 25% 50% 75% 100%	Talking with parents/adults 0% 25% 50% 75% 100%	Talking with parents/adults 0% 25% 50% 75% 100%	Talking with parents/adults 0% 25% 50% 75% 100%
Talking with other children 0% 25% 50% 75% 100%	Talking with other children 0% 25% 50% 75% 100%	Talking with other children 0% 25% 50% 75% 100%	Talking with other children 0% 25% 50% 75% 100%
Raising hands to answer/ask questions 0% 25% 50% 75% 100%	Raising hands to answer/ask questions 0% 25% 50% 75% 100%	Raising hands to answer/ask questions 0% 25% 50% 75% 100%	Raising hands to answer/ask questions 0% 25% 50% 75% 100%
Doing the activity 0% 25% 50% 75% 100%	Doing the activity 0% 25% 50% 75% 100%	Doing the activity 0% 25% 50% 75% 100%	Doing the activity 0% 25% 50% 75% 100%
Other:	Other:	Other:	Other:
<b>Parents:</b> Eyes on the instructor 0% 25% 50% 75% 100%	<b>Parents:</b> Eyes on the instructor 0% 25% 50% 75% 100%	<b>Parents:</b> Eyes on the instructor 0% 25% 50% 75% 100%	<b>Parents:</b> Eyes on the instructor 0% 25% 50% 75% 100%
Talking with child(ren) 0% 25% 50% 75% 100%	Talking with child(ren) 0% 25% 50% 75% 100%	Talking with child(ren) 0% 25% 50% 75% 100%	Talking with child(ren) 0% 25% 50% 75% 100%
Talking with other adults 0% 25% 50% 75% 100%	Talking with other adults 0% 25% 50% 75% 100%	Talking with other adults 0% 25% 50% 75% 100%	Talking with other adults 0% 25% 50% 75% 100%
Raising hands to answer/ask questions 0% 25% 50% 75% 100%	Raising hands to answer/ask questions 0% 25% 50% 75% 100%	Raising hands to answer/ask questions 0% 25% 50% 75% 100%	Raising hands to answer/ask questions 0% 25% 50% 75% 100%
Doing the activity 0% 25% 50% 75% 100%	Doing the activity 0% 25% 50% 75% 100%	Doing the activity 0% 25% 50% 75% 100%	Doing the activity 0% 25% 50% 75% 100%
Other:	Other:	Other:	Other:

Appendix N Continued

How much do you feel the children enjoyed this activity? For each level circle the percentage of children you felt were at that level.

REALLY ENJOYED	0%	25%	50%	75%	100%
ENJOYED	0%	25%	50%	75%	100%
SOMEWHAT ENJOYED	0%	25%	50%	75%	100%
ENJOYED VERY LITTLE	0%	25%	50%	75%	100%

How much do you feel the parents enjoyed this activity? For each level circle the percentage of parents you felt were at that level.

REALLY ENJOYED	0%	25%	50%	75%	100%
ENJOYED	0%	25%	50%	75%	100%
SOMEWHAT ENJOYED	0%	25%	50%	75%	100%
ENJOYED VERY LITTLE	0%	25%	50%	75%	100%

Was this activity a good fit for preschoolers and their parents? Why or why not?

General thoughts, suggestions, observation from activity one.

**Activity 2 Animal Movement**

Start time: \_\_\_\_\_ End time: \_\_\_\_\_

For every 5 minutes of the second activity indicate how many children and parents of the three families being observed, seemed engaged/interested in the activity.

Time	# of children engaged	# of parents engaged

What led you to believe they were not engaged/interested in the activity anymore?

Appendix N Continued

For each category below and time circle the appropriate choice for the three families being observed.

5 minutes into activity	10 minutes	15 minutes	20 minutes
<p><b>Children:</b> Eyes on the instructor 0% 25% 50% 75% 100%</p> <p>Talking with parents/adults 0% 25% 50% 75% 100%</p> <p>Talking with other children 0% 25% 50% 75% 100%</p> <p>Raising hands to answer/ask questions 0% 25% 50% 75% 100%</p> <p>Doing the activity 0% 25% 50% 75% 100%</p> <p>Other:</p>	<p><b>Children:</b> Eyes on the instructor 0% 25% 50% 75% 100%</p> <p>Talking with parents/adults 0% 25% 50% 75% 100%</p> <p>Talking with other children 0% 25% 50% 75% 100%</p> <p>Raising hands to answer/ask questions 0% 25% 50% 75% 100%</p> <p>Doing the activity 0% 25% 50% 75% 100%</p> <p>Other:</p>	<p><b>Children:</b> Eyes on the instructor 0% 25% 50% 75% 100%</p> <p>Talking with parents/adults 0% 25% 50% 75% 100%</p> <p>Talking with other children 0% 25% 50% 75% 100%</p> <p>Raising hands to answer/ask questions 0% 25% 50% 75% 100%</p> <p>Doing the activity 0% 25% 50% 75% 100%</p> <p>Other:</p>	<p><b>Children:</b> Eyes on the instructor 0% 25% 50% 75% 100%</p> <p>Talking with parents/adults 0% 25% 50% 75% 100%</p> <p>Talking with other children 0% 25% 50% 75% 100%</p> <p>Raising hands to answer/ask questions 0% 25% 50% 75% 100%</p> <p>Doing the activity 0% 25% 50% 75% 100%</p> <p>Other:</p>
<p><b>Parents:</b> Eyes on the instructor 0% 25% 50% 75% 100%</p> <p>Talking with child(ren) 0% 25% 50% 75% 100%</p> <p>Talking with other adults 0% 25% 50% 75% 100%</p> <p>Raising hands to answer/ask questions 0% 25% 50% 75% 100%</p> <p>Doing the activity 0% 25% 50% 75% 100%</p> <p>Other:</p>	<p><b>Parents:</b> Eyes on the instructor 0% 25% 50% 75% 100%</p> <p>Talking with child(ren) 0% 25% 50% 75% 100%</p> <p>Talking with other adults 0% 25% 50% 75% 100%</p> <p>Raising hands to answer/ask questions 0% 25% 50% 75% 100%</p> <p>Doing the activity 0% 25% 50% 75% 100%</p> <p>Other:</p>	<p><b>Parents:</b> Eyes on the instructor 0% 25% 50% 75% 100%</p> <p>Talking with child(ren) 0% 25% 50% 75% 100%</p> <p>Talking with other adults 0% 25% 50% 75% 100%</p> <p>Raising hands to answer/ask questions 0% 25% 50% 75% 100%</p> <p>Doing the activity 0% 25% 50% 75% 100%</p> <p>Other:</p>	<p><b>Parents:</b> Eyes on the instructor 0% 25% 50% 75% 100%</p> <p>Talking with child(ren) 0% 25% 50% 75% 100%</p> <p>Talking with other adults 0% 25% 50% 75% 100%</p> <p>Raising hands to answer/ask questions 0% 25% 50% 75% 100%</p> <p>Doing the activity 0% 25% 50% 75% 100%</p> <p>Other:</p>

Appendix N Continued

How much do you feel the children enjoyed this activity? For each level circle the percentage of children you felt were at that level.

REALLY ENJOYED	0%	25%	50%	75%	100%
ENJOYED	0%	25%	50%	75%	100%
SOMEWHAT ENJOYED	0%	25%	50%	75%	100%
ENJOYED VERY LITTLE	0%	25%	50%	75%	100%

How much do you feel the parents enjoyed this activity? For each level circle the percentage of parents you felt were at that level.

REALLY ENJOYED	0%	25%	50%	75%	100%
ENJOYED	0%	25%	50%	75%	100%
SOMEWHAT ENJOYED	0%	25%	50%	75%	100%
ENJOYED VERY LITTLE	0%	25%	50%	75%	100%

Was this activity a good fit for preschoolers and their parents? Why or why not?

General thoughts, suggestions, observation from activity two.

**Activity 3**                      **Forest Hike**  
 Start time: \_\_\_\_\_              End time: \_\_\_\_\_

For every 5 minutes of the third activity indicate how many children and parents, of the three families being observed, seemed engaged/interested in the activity.

Time	# of children engaged	# of parents engaged

What led you to believe they were not engaged/interested in the activity anymore?



Appendix N Continued

For each category below and time circle the appropriate choice for the three families being observed.

5 minutes into activity	10 minutes	15 minutes	20 minutes
<b>Children:</b> Eyes on the instructor 0% 25% 50% 75% 100%  Talking with parents/adults 0% 25% 50% 75% 100%  Talking with other children 0% 25% 50% 75% 100%  Raising hands to answer/ask questions 0% 25% 50% 75% 100%  Doing the activity 0% 25% 50% 75% 100%  Other:	<b>Children:</b> Eyes on the instructor 0% 25% 50% 75% 100%  Talking with parents/adults 0% 25% 50% 75% 100%  Talking with other children 0% 25% 50% 75% 100%  Raising hands to answer/ask questions 0% 25% 50% 75% 100%  Doing the activity 0% 25% 50% 75% 100%  Other:	<b>Children:</b> Eyes on the instructor 0% 25% 50% 75% 100%  Talking with parents/adults 0% 25% 50% 75% 100%  Talking with other children 0% 25% 50% 75% 100%  Raising hands to answer/ask questions 0% 25% 50% 75% 100%  Doing the activity 0% 25% 50% 75% 100%  Other:	<b>Children:</b> Eyes on the instructor 0% 25% 50% 75% 100%  Talking with parents/adults 0% 25% 50% 75% 100%  Talking with other children 0% 25% 50% 75% 100%  Raising hands to answer/ask questions 0% 25% 50% 75% 100%  Doing the activity 0% 25% 50% 75% 100%  Other:
<b>Parents:</b> Eyes on the instructor 0% 25% 50% 75% 100%  Talking with child(ren) 0% 25% 50% 75% 100%  Talking with other adults 0% 25% 50% 75% 100%  Raising hands to answer/ask questions 0% 25% 50% 75% 100%  Doing the activity 0% 25% 50% 75% 100%  Other:	<b>Parents:</b> Eyes on the instructor 0% 25% 50% 75% 100%  Talking with child(ren) 0% 25% 50% 75% 100%  Talking with other adults 0% 25% 50% 75% 100%  Raising hands to answer/ask questions 0% 25% 50% 75% 100%  Doing the activity 0% 25% 50% 75% 100%  Other:	<b>Parents:</b> Eyes on the instructor 0% 25% 50% 75% 100%  Talking with child(ren) 0% 25% 50% 75% 100%  Talking with other adults 0% 25% 50% 75% 100%  Raising hands to answer/ask questions 0% 25% 50% 75% 100%  Doing the activity 0% 25% 50% 75% 100%  Other:	<b>Parents:</b> Eyes on the instructor 0% 25% 50% 75% 100%  Talking with child(ren) 0% 25% 50% 75% 100%  Talking with other adults 0% 25% 50% 75% 100%  Raising hands to answer/ask questions 0% 25% 50% 75% 100%  Doing the activity 0% 25% 50% 75% 100%  Other:

Appendix N Continued

How much do you feel the children enjoyed this activity? For each level circle the percentage of children you felt were at that level.

REALLY ENJOYED	0%	25%	50%	75%	100%
ENJOYED	0%	25%	50%	75%	100%
SOMEWHAT ENJOYED	0%	25%	50%	75%	100%
ENJOYED VERY LITTLE	0%	25%	50%	75%	100%

How much do you feel the parents enjoyed this activity? For each level circle the percentage of parents you felt were at that level.

REALLY ENJOYED	0%	25%	50%	75%	100%
ENJOYED	0%	25%	50%	75%	100%
SOMEWHAT ENJOYED	0%	25%	50%	75%	100%
ENJOYED VERY LITTLE	0%	25%	50%	75%	100%

Was this activity a good fit for preschoolers and their parents? Why or why not?

General thoughts, suggestions, observation from activity three.

**Activity 4**                      **Nature's Collage**  
 Start time: \_\_\_\_\_              End time: \_\_\_\_\_

For every 5 minutes of the fourth activity indicate how many children and parents, of the three families being observed, seemed engaged/interested in the activity.

Time	# of children engaged	# of parents engaged

What led you to believe they were not engaged/interested in the activity anymore?

Appendix N Continued

For each category below and time circle the appropriate choice for the person/people being observed.

5 minutes into activity	10 minutes	15 minutes	20 minutes
<b>Children:</b> Eyes on the instructor 0% 25% 50% 75% 100%  Talking with parents/adults 0% 25% 50% 75% 100%  Talking with other children 0% 25% 50% 75% 100%  Raising hands to answer/ask questions 0% 25% 50% 75% 100%  Doing the activity 0% 25% 50% 75% 100%  Other:	<b>Children:</b> Eyes on the instructor 0% 25% 50% 75% 100%  Talking with parents/adults 0% 25% 50% 75% 100%  Talking with other children 0% 25% 50% 75% 100%  Raising hands to answer/ask questions 0% 25% 50% 75% 100%  Doing the activity 0% 25% 50% 75% 100%  Other:	<b>Children:</b> Eyes on the instructor 0% 25% 50% 75% 100%  Talking with parents/adults 0% 25% 50% 75% 100%  Talking with other children 0% 25% 50% 75% 100%  Raising hands to answer/ask questions 0% 25% 50% 75% 100%  Doing the activity 0% 25% 50% 75% 100%  Other:	<b>Children:</b> Eyes on the instructor 0% 25% 50% 75% 100%  Talking with parents/adults 0% 25% 50% 75% 100%  Talking with other children 0% 25% 50% 75% 100%  Raising hands to answer/ask questions 0% 25% 50% 75% 100%  Doing the activity 0% 25% 50% 75% 100%  Other:
<b>Parents:</b> Eyes on the instructor 0% 25% 50% 75% 100%  Talking with child(ren) 0% 25% 50% 75% 100%  Talking with other adults 0% 25% 50% 75% 100%  Raising hands to answer/ask questions 0% 25% 50% 75% 100%  Doing the activity 0% 25% 50% 75% 100%  Other:	<b>Parents:</b> Eyes on the instructor 0% 25% 50% 75% 100%  Talking with child(ren) 0% 25% 50% 75% 100%  Talking with other adults 0% 25% 50% 75% 100%  Raising hands to answer/ask questions 0% 25% 50% 75% 100%  Doing the activity 0% 25% 50% 75% 100%  Other:	<b>Parents:</b> Eyes on the instructor 0% 25% 50% 75% 100%  Talking with child(ren) 0% 25% 50% 75% 100%  Talking with other adults 0% 25% 50% 75% 100%  Raising hands to answer/ask questions 0% 25% 50% 75% 100%  Doing the activity 0% 25% 50% 75% 100%  Other:	<b>Parents:</b> Eyes on the instructor 0% 25% 50% 75% 100%  Talking with child(ren) 0% 25% 50% 75% 100%  Talking with other adults 0% 25% 50% 75% 100%  Raising hands to answer/ask questions 0% 25% 50% 75% 100%  Doing the activity 0% 25% 50% 75% 100%  Other:

Appendix N Continued

How much do you feel the children enjoyed this activity? For each level circle the percentage of children you felt were at that level.

REALLY ENJOYED	0%	25%	50%	75%	100%
ENJOYED	0%	25%	50%	75%	100%
SOMEWHAT ENJOYED	0%	25%	50%	75%	100%
ENJOYED VERY LITTLE	0%	25%	50%	75%	100%

How much do you feel the parents enjoyed this activity? For each level circle the percentage of parents you felt were at that level.

REALLY ENJOYED	0%	25%	50%	75%	100%
ENJOYED	0%	25%	50%	75%	100%
SOMEWHAT ENJOYED	0%	25%	50%	75%	100%
ENJOYED VERY LITTLE	0%	25%	50%	75%	100%

Was this activity a good fit for preschoolers and their parents? Why or why not?

General thoughts, suggestions, observation from activity four.

**Activity 5 Story Creation Activity**

Start time: \_\_\_\_\_ End time: \_\_\_\_\_

For every 5 minutes of the fourth activity indicate how many children and parents, of the three families being observed, seemed engaged/interested in the activity.

Time	# of children engaged	# of parents engaged

What led you to believe they were not engaged/interested in the activity anymore?

Appendix N Continued

For each category below and time circle the appropriate choice for the person/people being observed.

5 minutes into activity	10 minutes	15 minutes	20 minutes
<b>Children:</b> Eyes on the instructor 0% 25% 50% 75% 100%  Talking with parents/adults 0% 25% 50% 75% 100%  Talking with other children 0% 25% 50% 75% 100%  Raising hands to answer/ask questions 0% 25% 50% 75% 100%  Doing the activity 0% 25% 50% 75% 100%  Other:	<b>Children:</b> Eyes on the instructor 0% 25% 50% 75% 100%  Talking with parents/adults 0% 25% 50% 75% 100%  Talking with other children 0% 25% 50% 75% 100%  Raising hands to answer/ask questions 0% 25% 50% 75% 100%  Doing the activity 0% 25% 50% 75% 100%  Other:	<b>Children:</b> Eyes on the instructor 0% 25% 50% 75% 100%  Talking with parents/adults 0% 25% 50% 75% 100%  Talking with other children 0% 25% 50% 75% 100%  Raising hands to answer/ask questions 0% 25% 50% 75% 100%  Doing the activity 0% 25% 50% 75% 100%  Other:	<b>Children:</b> Eyes on the instructor 0% 25% 50% 75% 100%  Talking with parents/adults 0% 25% 50% 75% 100%  Talking with other children 0% 25% 50% 75% 100%  Raising hands to answer/ask questions 0% 25% 50% 75% 100%  Doing the activity 0% 25% 50% 75% 100%  Other:
<b>Parents:</b> Eyes on the instructor 0% 25% 50% 75% 100%  Talking with child(ren) 0% 25% 50% 75% 100%  Talking with other adults 0% 25% 50% 75% 100%  Raising hands to answer/ask questions 0% 25% 50% 75% 100%  Doing the activity 0% 25% 50% 75% 100%  Other:	<b>Parents:</b> Eyes on the instructor 0% 25% 50% 75% 100%  Talking with child(ren) 0% 25% 50% 75% 100%  Talking with other adults 0% 25% 50% 75% 100%  Raising hands to answer/ask questions 0% 25% 50% 75% 100%  Doing the activity 0% 25% 50% 75% 100%  Other:	<b>Parents:</b> Eyes on the instructor 0% 25% 50% 75% 100%  Talking with child(ren) 0% 25% 50% 75% 100%  Talking with other adults 0% 25% 50% 75% 100%  Raising hands to answer/ask questions 0% 25% 50% 75% 100%  Doing the activity 0% 25% 50% 75% 100%  Other:	<b>Parents:</b> Eyes on the instructor 0% 25% 50% 75% 100%  Talking with child(ren) 0% 25% 50% 75% 100%  Talking with other adults 0% 25% 50% 75% 100%  Raising hands to answer/ask questions 0% 25% 50% 75% 100%  Doing the activity 0% 25% 50% 75% 100%  Other:

## Appendix N Continued

How much do you feel the children enjoyed this activity? For each level circle the percentage of children you felt were at that level.

REALLY ENJOYED	0%	25%	50%	75%	100%
ENJOYED	0%	25%	50%	75%	100%
SOMEWHAT ENJOYED	0%	25%	50%	75%	100%
ENJOYED VERY LITTLE	0%	25%	50%	75%	100%

How much do you feel the parents enjoyed this activity? For each level circle the percentage of parents you felt were at that level.

REALLY ENJOYED	0%	25%	50%	75%	100%
ENJOYED	0%	25%	50%	75%	100%
SOMEWHAT ENJOYED	0%	25%	50%	75%	100%
ENJOYED VERY LITTLE	0%	25%	50%	75%	100%

Was this activity a good fit for preschoolers and their parents? Why or why not?

General thoughts, suggestions, observation from activity four.

### **General Information Post Program**

1. Indicate with an "x" which objectives listed below you witnessed being accomplished during this program.

- After completing the program the preschool children will be able to name three animals that live in a forest.
- Upon completion of a hike the preschool participants will be able to describe two or three characteristics of a forest.
- After completing the story book portion of the program the preschool participants will be able to list three aspects of a day in the life of forest animals.
- The preschool participants will be able to demonstrate how one forest animal moves, and how that movement is different from the way they move.

2. For each of the objectives listed please indicate for what percentage of the audience each objective was developmentally appropriate (0%, 25%, 50%, 75%, or 100%).

- After completing the program the preschool children will be able to name three animals that live in a forest. 0%, 25%, 50%, 75%, or 100%

Appendix N Continued

- Upon completion of a hike the preschool participants will be able to describe two or three characteristics of a forest. 0%, 25%, 50%, 75%, or 100%
- After completing the story book portion of the program the preschool participants will be able to list three aspects of a day in the life of forest animals. 0%, 25%, 50%, 75%, or 100%
- The preschool participants will be able to demonstrate how one forest animal moves, and how that movement is different from the way they move. 0%, 25%, 50%, 75%, or 100%

3. For the objectives where the developmentally appropriate percentage was lower than 50% are there any suggestions or changes that should be considered to increase the appropriateness of the program?

4. Circle the activity or portion of the program for which the time frame should be changed, if you feel the time frame should be changed.

Introduction                      Activity 1                      Activity 2                      Activity 3  
Activity 4

5. What would be the optimal length of time for one activity for this particular audience? \_\_\_\_\_

6. Any additional recommendations for improvement based on this observation?

Appendix O  
**Animal Facts Matching Activity**  
**Alternative Assessment Tool**

**Description of tool:**

The alternative assessment tool is a matching activity. This activity will take place at the very end of the program acting as the last activity of the program. The children will have to take what they learned throughout the program and apply it to a matching game to identify what different forest animals eat, where they live and how they move. The students will be looking at pictures and examples of what they learned about during the program and asked to match certain aspects to the correct animal. Below is a detailed procedure for how this activity can be used as an assessment tool. This activity will only take 10-15 minutes to complete at the end of the program.

**Program Objectives evaluated by this assessment tool:**

After completing the program the preschool children will be able to name three animals that live in a forest. (knowledge)

After completing the story book portion of the program the preschool participants will be able to list three aspects of a day in the life of forest animals. (responding)

**Procedure:**

1. Before activity can be implemented the following list of materials must be gathered.
  - a. Pictures or photos of each animal that was talked about during the program and would be included in the assessment.
  - b. Pictures or examples of food sources for each of the animals that were talked about during the program and would be included in the assessment.
  - c. Pictures of the homes of the each of the animals that were talked about during the program and would be included in the assessment.
2. Place the five animal photos in front of the children, and have them name each of the animals.
3. Place the pictures of homes in front of the children. One picture at a time, ask the children to raise their hands if they can identify which animal would live in that type of home. When they answer correctly lay the picture of the home next to the picture of the animal.
4. Place the pictures or examples of the different food sources in front of the children. One food source at a time, ask the children to raise their hands if they can identify which animal would live in that type of home. When they answer correctly lay the picture or example next to the picture of the animal.
5. When they have gone through identifying the animals, homes, and food review all of the animals with the children.
6. Use the grading rubric soon after doing the activity or have someone else during the activity score each of the children participating to get an accurate picture of knowledge gained.



Appendix O Continued

**Forest Animal Matching Grading Rubric**

For each child participating in the activity fill out the grading rubric below. For each of the items in the criteria column place an “X” in the box to the right that indicates at what level that criteria was displayed.

<b>Criteria</b>	<b>Maximum Knowledge Gained</b>	<b>High Level Knowledge Gained</b>	<b>Medium Level Knowledge Gained</b>	<b>Minimal Level Knowledge Gained</b>	<b>Little to no Knowledge Gained</b>
<b>Animal Identification</b>	Able to identify all five animals	Able to identify four out of five animals	Able to identify three out of five animals	Able to identify two out of five animals	Able to identify one or none of the animals
<b>Animal Home</b>	Able to match all five animal homes to the correct animal	Able to match four out of five animal homes to the correct animal	Able to match three out of five animal homes to the correct animal	Able to match two out of five animal homes to the correct animal	Able to match one or none of the animal homes to the correct animal
<b>Animal Diet</b>	Able to match all five animal foods to the correct animal	Able to match four out of five animal foods to the correct animal	Able to match three out of five animal foods to the correct animal	Able to match two out of five animal foods to the correct animal	Able to match one or none of the animal foods to the correct animal
<b>Score</b> (total number of “X”s in the columns above)	_____/ 3	_____/ 3	_____/ 3	_____/ 3	_____/ 3
<b>Total Points</b>	5 points each X = _____	4 points each X = _____	3 points each X = _____	2 points each X = _____	1 point each X = _____

**Total Points for Matching Activity = \_\_\_\_\_**

## Appendix P

### Family Environmental Education Program At the Central Wisconsin Environmental Station

#### Post Program Interview Form

##### Purpose:

The purpose of this interview will be to gain specific information from a few randomly selected parents that participated in the family program. The interview will help provide information to the development and implementation staff about how effective and successful the program was. The information from the parents will also provide insight about whether or not the parents are interested in pursuing other family programs, or other ways that they can get their child out into the woods.

##### Procedures for the Interview Form:

After the program has been implemented a few randomly selected parents, possibly two or three, will be asked to participate in a voluntary interview. The interview will take place at the Central Wisconsin Environmental Station (CWES) immediately following the program. A member of the staff at the Central Wisconsin Environmental Station, but not someone directly involved with the development or implementation of the program, will conduct the interview. The interview should only take fifteen to twenty minutes. While the parents are participating in the interview the children will be taken care of by fellow CWES staff. The interviewer will need to interview form, pen or pencil, clipboard, and tape recorder.

Appendix P Continued  
Family Environmental Education Program  
At the Central Wisconsin Environmental Station

Post Program Interview Form

Interviewer's Name: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Interviewee's Identification number: \_\_\_\_\_

Interview location: \_\_\_\_\_

Introductory statement to be read, or paraphrased to the interviewee:

Thank you for agreeing to do this interview. The answers you give from this interview will help the staff at the Central Wisconsin Environmental Station to improve their family programs. It may also help with the possible development of future family programs. The information could also help many other nature centers with improving their family programs. Your name is not being recorded and none of your personal information will be used in this study. Not using your name gives you the ability to answer honestly to all of the questions. There are no wrong answers to the questions in this interview. Any information you give will be helpful. The interview should only last fifteen to twenty minutes. Again, we would like to thank you for your help with this interview about family programs.

Is it okay if this interview is recorded?      YES   or   NO

Interview Questions:

Question one:      Who did you bring to the family program? (age, sex, number of child/children)

Question two:      How interested was/were your child(ren) in learning about forests prior to attending this program?

Question three:      Which activities did you and your child(ren) enjoy?

Probe:      Tell me more about what you did during the activities.

Question four:      What did you learn about forests and forest animals from the program?

Question five:      In what way do you think your child's attitudes about forests may have changed after coming to this program?

Question six:      What changes do you feel could be made to the forest hike to increase the level of exploration for the children?

### Appendix P Continued

- Questions seven: Do you foresee, as a result of this program, that you will take your child into the woods more often than you did before?
- Questions eight: What resources would you find useful to continue exploring nature with your child?
- Question nine: Around what other topics, or habitats, would you be interested in seeing a family program developed?
- Question ten: Where else would you be interested in seeing these types of family programs offered?
- Question eleven: What other thoughts do you have about family programs?
- Questions twelve: Is there anything else you would like to add or clarify about the program that you just went to?

### Interviewer Reminders:

At the end of the interview summarize the main points made by the interviewee (see script below).

Thank the interviewee for their time and their help with the interview and the overall research project.

Script for interviewer – “Thank you so much for your time this morning. I want to recap the main points that you made during this interview to be sure that I have everything recorded accurately. You came to this program today with \_\_\_\_\_. Your child(ren) had \_\_\_\_\_ amount of interest in forests prior to attending the program. With regards to forest animals your child(ren) had interest in \_\_\_\_\_. The animal movement activity was \_\_\_\_\_ interesting to your child(ren). The activities that you and your family enjoyed the most were \_\_\_\_\_. You stated that you learned \_\_\_\_\_ about forests and forest animals. You believe your child(ren) attitudes about forests \_\_\_\_\_. The forest hike \_\_\_\_\_ allowed your child(ren) to explore the forest and you described \_\_\_\_\_ changes that could be made. With regards to whether or not you feel you will take your child into the woods more often after attending this program you said \_\_\_\_\_. You mentioned \_\_\_\_\_ as resources you feel are useful as a parent. \_\_\_\_\_ are other topics you would be interested in seeing a program developed around. You mentioned these other facilities \_\_\_\_\_ as places that you would like to see develop family programs. Is there anything that I missed, or misrepresented?”

Appendix Q  
Family Environmental Education Program  
At the Central Wisconsin Environmental Station

Post Program Survey

**Purpose of the Survey:**

The questionnaire will help to determine the parents and children's feelings about the program, and the different activities. The parents will also help to provide information about whether or not parts of the program should be changed or improved. The questionnaire will also ask the parents if they are interested in attending other family programs at the Central Wisconsin Environmental Station, or other environmental education facilities.

**Procedures for the Questionnaire:**

The questionnaire will be sent out to the parents who participated in the family program. The registration form that the parents fill out will provide us with access to their email address if they have one. For the parents that have an email address the survey can be sent to them electronically. For families that do not have, or do not wish to share their email address they will get it in the mail. The questionnaire will be sent out about a month after the program takes place. About a week after the survey has been sent, either through the mail, or through email, a reminder postcard will be sent out. The parents will be encouraged to send the questionnaire back to CWES, either to the CWES email address, or through the mail in the self-addressed stamped envelope that they will receive with the questionnaire.

## Appendix Q Continued

Dear Preschooler Parents,

We need your help to improve outdoor programs for preschool children in central Wisconsin. Please share your knowledge and experience as a parent on the attached questionnaire.

As a graduate student, I'm surveying the parents who attended the family program at the CWES. The questionnaire will help me to find out what you enjoyed, how well you feel the program educated your children, and what your future interests are in attending more programs.

You're holding a survey that will take only five to ten minutes to complete. It will give us important information. Based on your response and that of other parents, more programs could be developed. Also, changes can be made to the program that you attended to make it better for future groups.

Your responses to this survey will be completely anonymous. No personal information will be identified in the research.

Included in this packet you will find the survey and self addressed stamped envelope to make it easy for you to return the survey.

If you have any questions please do not hesitate to call.

Thank you so much for your time.

Sincerely,

Abigail Enlund  
Graduate Assistant  
Central Wisconsin Environmental Station  
University of Wisconsin - Stevens Point  
715-544-0145  
Aenlu661@uwsp.edu

## Appendix Q Continued

### Family Environmental Education Program

At the Central Wisconsin Environmental Station

#### Post-program Survey

Please take a few minutes to fill out this survey about the family program that you recently attended at the Central Wisconsin Environmental Station. The information that you provide us will help us to improve the program for the future. You can mail the survey back to the Central Wisconsin Environmental Station (CWES) in the envelope that has been provided.

Thank you for your time.

Please circle your level of agreement with the following statements. The scale is as follows; SD – strongly disagree, D – disagree, N – neither agree nor disagree, A – agree, SA – strongly agree.

- |   |    |   |   |   |    |
|---|----|---|---|---|----|
| 1. My child and I enjoyed the program that we attended at CWES.                                 | SD | D | N | A | SA |
| 2. My child and I have discussed what we did and learned since the program we attended at CWES. | SD | D | N | A | SA |
| 3. My child's interest in forests has increased since the program we attended at CWES.          | SD | D | N | A | SA |
| 4. My child's interest in forest animals has increased since the program we attended at CWES.   | SD | D | N | A | SA |
| 5. My child's interest in animals in general and where they live has increased.                 | SD | D | N | A | SA |
| 6. My child and I have spent time exploring forests since we attended the program at CWES.      | SD | D | N | A | SA |

Additional comments on how your child's interests have changed.

## Appendix Q Continued

Now that you have experienced a family environmental education program,

7. How much would you be willing to pay for a family program? (Mark all that apply.)

- \$15 or less for a half day including programming.
- \$15 or more for a half day including programming.
- \$30 or less for a one day including programming, snack & lunch.
- \$30 or more for a one day including programming, snack & lunch.
- \$120 or less for a series of programs, 5 days, 2 hours each day, including programming
- \$120 or more for a series of programs, 5 days, 2 hours each day, including programming
- \$365 or less for a weekend including all programming, food and lodging
- \$365 or more for a weekend including all programming, food and lodging

8. Do you have plans to attend another family program at CWES or at another location?

YES or NO

If no, what would encourage you to attend other family programs?

9. If a program were designed around one of these topics which would you be most likely to attend? (Please rank your interest level in these topics 1 through 6; 1 – most interest to 6- least interested.)

- Land animals
- Aquatic animals
- Land insects
- Aquatic insects
- Plants
- Non-living topics; rocks, minerals, soil
- other, please describe.

This last question is a way for CWES to build on what is already going on and fill in the gaps for what is missing in the area of family environmental education programs.

10. Are there other programs at other nature centers that you plan on attending, or know about? YES or NO

If yes, please state what center, and which program.

Thank you!

Central Wisconsin Environmental Station 10086 County Hwy MM  
Amherst Junction, WI 54409



Appendix R

**Alternative Assessment Totals - Forest Animal Matching Grading Rubric Totals**

For each child participating in the activity fill out the grading rubric below. For each of the items in the criteria column place an “X” in the box to the right that indicates at what level that criteria was displayed.

CHILD 1

<b>Criteria</b>	<b>Maximum Knowledge Gained</b>	<b>High Level Knowledge Gained</b>	<b>Medium Level Knowledge Gained</b>	<b>Minimal Level Knowledge Gained</b>	<b>Little to no Knowledge Gained</b>
<b>Animal Identification</b>	Able to match all five methods of animal movement to the correct animal	Able to match four out of five methods of animal movement to the correct animal	Able to match three out of five methods of animal movement to the correct animal	Able to match two out of five methods of animal movement to the correct animal X	Able to match one or none of the methods of animal movement to the correct animal
<b>Animal Home</b>	Able to match all five animal homes to the correct animal	Able to match four out of five animal homes to the correct animal X	Able to match three out of five animal homes to the correct animal	Able to match two out of five animal homes to the correct animal	Able to match one or none of the animal homes to the correct animal
<b>Animal Diet</b>	Able to match all five animal foods to the correct animal	Able to match four out of five animal foods to the correct animal X	Able to match three out of five animal foods to the correct animal	Able to match two out of five animal foods to the correct animal	Able to match one or none of the animal foods to the correct animal
<b>Score</b> (total number of “X”s in the columns above)	_____/ 3	__2___/ 3	_____/ 3	__1___/ 3	_____/ 3
<b>Total Points</b>	5 points each X = _____	4 points each X = __8__	3 points each X = _____	2 points each X = __2__	1 point each X = _____

**Total Points for Matching Activity = \_\_\_\_10\_/15**

Appendix R Continued

**Forest Animal Matching Grading Rubric**

CHILD 2

<b>Criteria</b>	<b>Maximum Knowledge Gained</b>	<b>High Level Knowledge Gained</b>	<b>Medium Level Knowledge Gained</b>	<b>Minimal Level Knowledge Gained</b>	<b>Little to no Knowledge Gained</b>
<b>Animal Identification</b>	Able to identify all five animals	Able to identify four out of five animals X	Able to identify three out of five animals	Able to identify two out of five animals	Able to identify one or none of the animals
<b>Animal Home</b>	Able to match all five animal homes to the correct animal	Able to match four out of five animal homes to the correct animal X	Able to match three out of five animal homes to the correct animal	Able to match two out of five animal homes to the correct animal	Able to match one or none of the animal homes to the correct animal
<b>Animal Diet</b>	Able to match all five animal foods to the correct animal	Able to match four out of five animal foods to the correct animal	Able to match three out of five animal foods to the correct animal X	Able to match two out of five animal foods to the correct animal	Able to match one or none of the animal foods to the correct animal
<b>Score</b> (total number of "X"s in the columns above)	_____/ 3	__2___/ 3	__1___/ 3	_____/ 3	_____/ 3
<b>Total Points</b>	5 points each X = _____	4 points each X = __8__	3 points each X = __3__	2 points each X = _____	1 point each X = _____

**Total Points for Matching Activity = \_\_\_\_11\_\_/15**

Appendix R Continued

**Forest Animal Matching Grading Rubric**

CHILD 3

<b>Criteria</b>	<b>Maximum Knowledge Gained</b>	<b>High Level Knowledge Gained</b>	<b>Medium Level Knowledge Gained</b>	<b>Minimal Level Knowledge Gained</b>	<b>Little to no Knowledge Gained</b>
<b>Animal Identification</b>	Able to identify all five animals X	Able to identify four out of five animals	Able to identify three out of five animals	Able to identify two out of five animals	Able to identify one or none of the animals
<b>Animal Home</b>	Able to match all five animal homes to the correct animal X	Able to match four out of five animal homes to the correct animal	Able to match three out of five animal homes to the correct animal	Able to match two out of five animal homes to the correct animal	Able to match one or none of the animal homes to the correct animal
<b>Animal Diet</b>	Able to match all five animal foods to the correct animal	Able to match four out of five animal foods to the correct animal X	Able to match three out of five animal foods to the correct animal	Able to match two out of five animal foods to the correct animal	Able to match one or none of the animal foods to the correct animal
<b>Score</b> (total number of "X"s in the columns above)	___2___/ 3	___1___/ 3	_____/ 3	_____/ 3	_____/ 3
<b>Total Points</b>	5 points each X = ___10__	4 points each X = ___4___	3 points each X = _____	2 points each X = _____	1 point each X = _____

**Total Points for Matching Activity = \_\_\_\_\_14\_\_\_/15**

Appendix R Continued

**Forest Animal Matching Grading Rubric**

CHILD 4

<b>Criteria</b>	<b>Maximum Knowledge Gained</b>	<b>High Level Knowledge Gained</b>	<b>Medium Level Knowledge Gained</b>	<b>Minimal Level Knowledge Gained</b>	<b>Little to no Knowledge Gained</b>
<b>Animal Identification</b>	Able to identify all five animals X	Able to identify four out of five animals	Able to identify three out of five animals	Able to identify two out of five animals	Able to identify one or none of the animals
<b>Animal Home</b>	Able to match all five animal homes to the correct animal	Able to match four out of five animal homes to the correct animal X	Able to match three out of five animal homes to the correct animal	Able to match two out of five animal homes to the correct animal	Able to match one or none of the animal homes to the correct animal
<b>Animal Diet</b>	Able to match all five animal foods to the correct animal X	Able to match four out of five animal foods to the correct animal	Able to match three out of five animal foods to the correct animal	Able to match two out of five animal foods to the correct animal	Able to match one or none of the animal foods to the correct animal
<b>Score</b> (total number of "X"s in the columns above)	___2___/ 3	___1___/ 3	_____/ 3	_____/ 3	_____/ 3
<b>Total Points</b>	5 points each X = ___10__	4 points each X = ___4___	3 points each X = _____	2 points each X = _____	1 point each X = _____

**Total Points for Matching Activity = \_\_\_\_\_14\_\_\_/15**

Appendix S

**Post Program Interview Results**

Family Environmental Education Program

At the Central Wisconsin Environmental Station

Post Program Interview Form

Interviewer's Name: \_\_\_Cortney Schaefer\_\_\_\_\_

Date/Time:

\_\_\_3-17-2007\_\_\_

Interviewee's Identification number: \_\_\_\_\_1\_\_\_\_\_

Interview location: \_\_\_Conference Room - CWES\_\_\_\_\_

Introductory statement to be read, or paraphrased to the interviewee:

Thank you for agreeing to do this interview. The answers you give from this interview will help the staff at the Central Wisconsin Environmental Station to improve their family programs. It may also help with the possible development of future family programs. The information could also help many other nature centers with improving their family programs. Your name is not being recorded and none of your personal information will be used in this study. Not using your name gives you the ability to answer honestly to all of the questions. There are no wrong answers to the questions in this interview. Any information you give will be helpful. The interview should only last fifteen to twenty minutes. Again, we would like to thank you for your help with this interview about family programs.

Is it okay if this interview is recorded?      YES

Interview Questions:

Question one:              Who did you bring to the family program? (age, sex, number of child/children)

“1 son – 5 years – youngest son”

Question two:              How interested was/were your child(ren) in learning about forests prior to attending this program?

“This morning didn't want to come, but does enjoy the outdoors. Once here he opened up and had a great time.”

Question three:              Which activities did you and your child(ren) enjoy?

“The nature walk was great, if I had dressed him warmer he may have enjoyed it more. And at the end the tree cookie was the best activity, the most engaging for both of us, we both got involved. Kids really liked the story at the beginning, I think it made them feel more welcomed and comfortable with Abbie.”

## Appendix S Continued

- Probe: Tell me more about what you did during the activities.  
“Trying to keep my son out of trouble, just supporting. In the end I think it was nice that we could do some things together, its difficult with more than one child at home, I have a young baby that doesn’t allow us to do as many things so this was nice to have a one-on-one day with my son.”
- Question four: What did you learn about forests and forest animals from the program?  
“Plants and animals were good review, learned a lot about facility here and what I have been missing out here. A lot to offer here. The parent packet was very informative I peeked at the CWES Adventure Quest brochure and it looks very inviting, great stuff is offered.”
- Question five: In what way do you think your child’s attitudes about forests may have changed after coming to this program?  
“I think he has more appreciation, and understands the role that different plants and animals play in the community. More knowledge.”
- Question six: What changes do you feel could be made to the forest hike to increase the level of exploration for the children?  
“She did a great job giving the weather. It is hard to predict what the weather is going to be out there, I mean last weekend would have been great compared to this weekend. Its hard to work with the weather. No major changes. She pointed out all the signs of different animals, things that kids and parents would have missed, and speaking at there level. She brought it down to their level, which was great.”
- Questions seven: Do you foresee, as a result of this program, that you will take your child into the woods more often then you did before?  
“Yeah, I think so.”
- Questions eight: What resources would you find useful to continue exploring nature with your child?  
“Having days like this to give me an idea what’s out there, to give the kids a good first experience, which is really important. Doesn’t have to be a full day, a half-day like this was just perfect to give them a taste of what’s out there. Could have used more guidance with what to do with the equipment, he did not know what to do with the little magnifying box, so he didn’t really use that when we

## Appendix S Continued

were on the hike, but once we got back inside he figured it out and used it more.”

- Question nine:           Around what other topics, or habitats, would you be interested in seeing a family program developed?  
“Water exploration. We go to the lake and he likes to find the aquatic insects. Water unit or water animals.”
- Question ten:           Where else would you be interested in seeing these types of family programs offered?  
“Locally Schemeeckle Reserve would be a good place at the University. On the Ice Age trail, a hike could be done there for older kids. Lion’s camp does some things maybe.”
- Question eleven:       What other thoughts do you have about family programs?  
“Its good to bring families together, we are involved in a lot of things but sometimes its hard to find things that you can get involved in that involve nature.”
- Questions twelve:      Is there anything else you would like to add or clarify about the program that you just went to?  
“Very well put together, enjoyable day I wish more people had taken advantage of it. My wife found out about it at school. Being the weekend before spring break probably affected this.”

Appendix S Continued

Family Environmental Education Program  
At the Central Wisconsin Environmental Station

Post Program Interview Form

Interviewer's Name: \_\_\_\_\_ Jenni Webster \_\_\_\_\_  
\_\_\_\_\_ 3-17-2007 \_\_\_\_\_

Date/Time:

Interviewee's Identification number: \_\_\_2\_\_\_\_\_

Interview location: \_\_\_\_\_ CWES – Scott's Office \_\_\_\_\_

Introductory statement to be read, or paraphrased to the interviewee:

Thank you for agreeing to do this interview. The answers you give from this interview will help the staff at the Central Wisconsin Environmental Station to improve their family programs. It may also help with the possible development of future family programs. The information could also help many other nature centers with improving their family programs. Your name is not being recorded and none of your personal information will be used in this study. Not using your name gives you the ability to answer honestly to all of the questions. There are no wrong answers to the questions in this interview. Any information you give will be helpful. The interview should only last fifteen to twenty minutes. Again, we would like to thank you for your help with this interview about family programs.

Is it okay if this interview is recorded?      YES

Interview Questions:

Question one:      Who did you bring to the family program? (age, sex, number of child/children)

Son – 5 years old

Question two:      How interested was/were your child(ren) in learning about forests prior to attending this program?

I think, ya know he liked being outdoors, so he was a little interested, but got more interested when he knew his friend was coming too.

Question three:      Which activities did you and your child(ren) enjoy?

The craft and the walk. Liked picking stuff and up and putting it on the board, even though I did the gluing, I just think he really enjoyed doing something hands on.

Probe:      Tell me more about what you did during the activities.



## Appendix S Continued

- Question four: What did you learn about forests and forest animals from the program?  
Where they lived, I had some knowledge about that, but just getting more knowledge about that.
- Question five: In what way do you think your child's attitudes about forests may have changed after coming to this program?  
Likes being out in the woods, so I think he just probably learned more about where they lived. You all brought it down to his level so he could see more where they live. She was very animated pointing out the animals homes and signs of animals, helping them and everything.
- Question six: What changes do you feel could be made to the forest hike to increase the level of exploration for the children?  
I think it was very good cause right now there is snow, you know I think they could wander a little bit more, but with the snow maybe not. But the way that she stopped and said okay now this is your time to explore I thought that was good, cause it let the parents know okay now you can get off the trail, since normally we hear don't get off the trail, so letting us know was good so we felt comfortable leading our children in different directions. It was good.
- Questions seven: Do you foresee, as a result of this program, that you will take your child into the woods more often then you did before?  
Probably about the same cause we already like to take him hiking.
- Questions eight: What resources would you find useful to continue exploring nature with your child?  
What things as a parent to point out to children their age and maybe some child activities that would be fun for us to do together. I mean I am usually like oh wow there is a bird, I mean maybe just some more ideas about what to do for me as a parent.
- Question nine: Around what other topics, or habitats, would you be interested in seeing a family program developed?  
I think it was good to do native animals, not elephants or something, so Wisconsin Animals were perfect.
- Question ten: Where else would you be interested in seeing these types of family programs offered?  
I think this is a wonderful place! Its nice cause trails are already made, and there was snack and the fire place.

## Appendix S Continued

- Question eleven: What other thoughts do you have about family programs?  
I really like them. This was nice out here. I think once a month would be great, more than that wouldn't work cause families are busy, but this was great.
- Questions twelve: Is there anything else you would like to add or clarify about the program that you just went to?  
It was very good. Abbie did a good job, she was animated and energetic, she kept the kids active and held their attention. She is a wonderful teacher. I just thought it was very good.

Appendix T

**30 Day Post Program Survey Results**

Question 1

**Enjoyed the Program**

SD	D	N	A	SA	
					2

Question 2

**Discussed Program**

SD	D	N	A	SA	
					2

Question 3

**Interest in Forest Increased**

SD	D	N	A	SA	
			1	1	

Question 4

**Interest in Forest Animals Increased**

SD	D	N	A	SA	
			1	1	

Question 5

**Interests in Animals in General Increased**

SD	D	N	A	SA	
			1	1	

Question 6

**Spent time Exploring Forests**

SD	D	N	A	SA	
		1		1	

Question 7

**Child Retained Information**

SD	D	N	A	SA	
			1	1	

Question 8

**Willing to Pay**

Less than \$15	2
More than \$15	
Less than \$30	2
More than \$30	
Less than \$120	
More than \$120	
Less than \$365	
More than \$365	

Question 9

**Plans to Attend Other Programs**

Yes	No
	2

Question 10

**Topic of Interest (ranked 1-6; 1 most interested)**

Land Animals	1	1
Aquatic Animals	3	2
Land		
Insects	5	3
Aquatic Insects	6	4
Plants	2	5
Non-living topics	4	6

Question 11

**Programs at Other Centers**

Yes	No
	2

Question 12

**Other Comments**

I thought it was well constructed for the age group and then right amount of time for a 4 year olds attention span.	I thought the program was a lot of fun. The teacher was very enthusiastic. My son really enjoyed the craft project. Well done.
---	--